THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF WORKS AND TRANSPORT

TANZANIA NATIONAL ROADS AGENCY (TANROADS)

PRE - FEASIBILITY STUDY REPORT FOR IMPLEMENTATION OF KIBAHA - MLANDIZI - CHALINZE - MOROGORO TOLL EXPRESSWAY (205 KM) PROJECT UNDER PUBLIC PRIVATE PARTNERSHIP (PPP) ARRANGEMENT

Prepared by:

Tanzania National Roads Agency (TANROADS),
3rd Floor, 10 Shaaban Robert/Garden Avenue Junction,
P.O. Box 11364,
Dar es Salaam.

Tel: +255 222926001-6
Fax: +2552229211/2/3/4
Email: tanroadshq@tanroads.go.tz
Website: www.tanroads.go.tz

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PROJECT SUMMARY

1.	PPP Project Number	…….
2.	Name of Project	Kibaha – Mlandizi – Chalinze – Morogoro (205 km) Toll Expressway under Public-Private-Partnership Implementation
3	Contracting Authority	Tanzania National Roads Agency (TANROADS).
4	Sector Ministry	Ministry of Works and Transport (MOWT).
5	Location of the Project	Kibaha and Chalinze districts in Coast Region and Morogoro Rural, Mvomero & Morogoro Municipality in Morogoro Region.

1.	Project Officer	Designation: PPP - Manager Name: Eng. Kitainda Harold M. Contact Address: P. O. Box 11364, Dar es Salaam, Tanzania

PROJECT MANAGEMENT TEAM

S/N	INSTITUTION	NAME
1.	Contracting Authority	Designation: PPP - Manager Name: Eng. Kitainda Harold M. Contact Address: P. O. Box 11364, Dar es Salaam, Tanzania
		Designation: Desk Officer Name: Eng. Godson M. Ngumuo Address: P. O. Box 11364, Dar es Salaam, Tanzania
		Designation: Highway Project Engineer Name: Eng. Nelson Bisigoro Contact Address: P. O. Box 11364, Dar es Salaam, Tanzania
		Designation: Structural Project Engineer Name: Eng. Emanuel N. Msumba Contact Address: P. O. Box 11364, Dar es Salaam, Tanzania
		Designation: Project Legal Advisor Name: Mr. Boniface A. Mtinangi Contact Address: P. O. Box 11364, Dar es Salaam, Tanzania
		Designation: Project Economic Advisor

		Name: Mr. Elirehema O. Saiteru Contact Address: P. O. Box 11364, Dar es Salaam, Tanzania
2.	PPP Centre	Designation: PPP Expert Name: Mr. Augustino O. Saibull Contact Address: P. O. Box 2802, Dodoma, Tanzania
3	PPP Node	Designation: PPP Expert Name: Mr. Gabriel Hango Contact Address: P. O. Box 1923, Dodoma, Tanzania
4	Ministry responsible for Finance	Designation: PPP Expert Name: Mr. Alfred P. Misana Contact Address: P. O. Box 2802, Dodoma, Tanzania
5	Ministry of Works and Transport (Works)	Designation: Desk Officer Name: Eng. Ronald M. Lwakatare Contact Address: Government City Mtumba P. O. Box 2888 40470 Dodoma, Tanzania
6	The Office of Attorney General	Designation: Senior State Attorney Name: Ms. Felista S. Lelo Contact Address: Office of Attorney General Government City Mtumba Mwanasheria Street P. O. Box 630, Dodoma, Tanzania

PROJECT SPECIFICATIONS

1.	Illustration of PPP Model	Design-Build-Finance-Operate–Maintain and Transfer (DBFOMT). Under this model the private sector Designs, Builds, Finances, Operates and Maintains the Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway (205 km). At the end of the concession period, the facilities will be transferred to the public sector (TANROADS).
2.	Project Output	The expected outputs of the project will include construction of 4 lanes carriageway with a design speed of 120km/hr, modern rest areas at intermediate locations along the route, road service level that meets international standards, free

		interchanges and Toll Plazas with an e-tolling system at entry and exist points.
2.	Expected Revenues	**Scenario 1;** Kibaha – Chalinze – Morogoro (Rigid Pavement) TZS 16,975,071,086,760 Kibaha – Chalinze – Morogoro (Flexible Pavement) TZS 13,666,511,310,240 **Scenario 2;** **Lot 1:** Kibaha – Chalinze TZS 12,230,681,465,798, **Lot 2:** Chalinze – Morogoro TZS 17,897,027,137,536
3.	• Period of Concession • Design & Construction period • Operation period • Hand Back date	• 25 years (inclusive of 3 years construction period), start from June 2024 to May 2049. • 3 years start July 2024 to June 2027 • 22 years start from September, 2027 to May 2049 • November 2049 (6 months after Concession period)
4.	Empowerment of Tanzanians (Local Content Management)	a. Employment of Tanzanian nationals in various positions in the project company, b. Employment of Local Contractors and Consultants and, c. Use of locally available materials and other resources for the project.
5.	Project Beneficiaries	a. Private party will earn return on investment and improve investment profile, b. Road User will save travel time, reduce vehicles operating costs, have alternative route, improve safety and health, improve access to social services and increasing business profit. c. Government will improve road services, reduce congestion, increase government asset, increase revenue, employment, innovation, poverty reduction, improved productivity and promote economic developments of the nation.

		d. General public benefit from reduced logistic cost, improved access to social services, employment and improved social economic activities. e. Project workers will benefit from employment, training, remuneration and knowledge transfer. f. The project will increase land value and give an impetus to the real-estate sector in the surrounding areas. g. The project will reduce congestion and improve access to neighboring countries of Kenya, Uganda, Rwanda, Burundi, DRC Congo, Zambia and Malawi hence promoting investment and trade.

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ABBREVIATIONS AND ACRONYMS

AG	Attorney General
BBO	Buy, Build and Operate
BEE	Business Enabling Environment
BLT	Build, Lease and Transfer
BMS	Building Management System
BOO	Build, Own and Operate
BOQ	Bill of Quantities
BOT	Build, Operate and Transfer
BoT	Bank of Tanzania
BRELA	Business Registration and Licensing Agency
CA	Contracting Authority
CAG	Controller and Auditor General
Cap	Chapter
CBD	Central Business District
CCTV	Closed-Circuit Television
COD	Commencement Operational Date
COSOTA	Copyright Society of Tanzania
CRB	Contractors Registration Board
DAWASA	Dar es Salaam Water and Sewage Authority
DB	Design and Build
DBFO/M	Design, Build, Finance and Operate/Maintain
CE	Chief Executive
EFD	Electronic Fiscal Device
ELRA	Employment and Labor Relations Act
EMA	Environmental Management Act
EMC	Electromagnetic Compatibility
EMS	Environmental Management System
ERB	Engineers Registration Board
ESCAP	Economic and Social Commission for Asia and Pacific
ESIA	Environmental and Social Impact Assessment
EU	European Union
FS	Feasibility Study
FYDP	Five Year Development Plan
FYSP III	Five Year Strategic Plan III
GDP	Gross Domestic Product
GN	Government Notice
HF	Chief Accountant/Head of Finance
HMIS	Health Management Information System
ICT	Information and Communication Technology

IEC	International Electro-technical Commission
IRR	Internal Rate of Return
ISO	International Standards Organization
LCA	Life-Cycle Analysis
LCC	Low Cost Carrier
LGA	Local Government Authority
LLA	Land Lease Agreement
MAB	Ministerial Advisory Board
MLHHS	Ministry of Land, Housing and Human Settlements Development
MoFP	Ministry of Finance and Planning
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MSD	Medical Store Department
MTEF	Medium Term Expenditure Framework
NBS	National Bureau of Statistics
NEEA	National Economic Empowerment Act
NEEC	National Economic Empowerment Council
NEEP	National Economic Empowerment Policy
NEMC	National Environment Management Council
NFPA	National Fire Protection Association
NGOs	Non-Governmental Organizations
NPV	Net Present Value
NSSF	National Social Security Fund
OAG	Office of the Attorney General
O&M	Operation and Maintenance
OSHA	Occupational, Safety and Health Authority
PA	Public Address
PARCS	Parking and Revenue Control System
PAYE	Pay As You Earn
PMO	Prime Minister's Office
PPA	Public Procurement Act
PPP	Public Private Partnership
PPRA	Public Procurement Regulatory Authority
QCBS	Quality Cost-Based Selection
RAM	Risk Assessment Matrix
RC	Regional Commissioner
ROE	Return On Equity
ROI	Return on Investment
SDG's	Sustainable Development Goals
SGR	Standard Gauge Railways

SIA	Social Impact Assessment
SQM	Square Meter
SUDS	Suitability Urban Drainage System
SWOC	Strengths, Weaknesses, Opportunities and Challenges
TDV	Tanzania Development Vision
TIC	Tanzania Investment Centre
TIN	Taxpayer Identification Number
TRA	Tanzania Revenue Authority
TZS	Tanzanian Shilling
URT	United Republic of Tanzania
USD	United States Dollars
VAT	Value Added Tax
WACC	Weighted Average Cost of Capital
WB	World Bank
WCP	Workers Compensation Program

EXECUTIVE SUMMARY

Tanzania National Roads Agency (TANROADS), is established by the National Agencies Establishment Act CAP.245 (RE 2007) of year 2000, under Order GN. 293 of 2000 as amended by GN. 350 of 2009 and GN. 232 of 2020. TANROADS operates as semi-autonomous Agency of the Ministry of Works and Transport with mandates of day-to-day development and maintenance of national road network, operation and management of weighbridge stations, design and development of airports in the country. Pursuant to Section 6 (2) of the Road Act 2007, TANROADS has a function to negotiate concession agreements with private party entities to facilitate financing and development of selected roads in accordance with guidelines prescribed by the government. Development and implementation of Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway (205 km) through PPP arrangement falls under the TANROADS core functions. The proposed project is expected to achieve viability, fiscal affordability and explore value for money.

TANROADS Vision is to be a World Class Agency dedicated to providing a connected and sustainable all weather national road network and airports. Its Mission is to manage national road network and airports from planning, designing, construction and maintenance through a competent workforce.

TANROADS is implementing 5 strategic objectives in its Sixth Strategic Plan, which include among others, improved National Road Network and Airports, Resources Management and Institutional capacity to deliver services. The Kibaha - Chalinze - Morogoro Toll Expressway is among the key Strategic Projects planned to address congestion in Dar es Salaam, Coast and Morogoro Regions in the TANROADS 6th Strategic Plan 2021/22 – 2025/26 and in the Five National Five Year Development Plan 2021/22 – 2025/26.

The Kibaha - Morogoro road is highly congested and its service level is poor, which need to be addressed with immediate effect. The increase of traffic volume is mainly due to growth of economic activities within the country and the neighbouring countries. The current travel time from Kibaha to Morogoro is 4 hrs whereas if the Expressway is provided travel time will be reduced to 2 hrs. The current condition of the road has significantly increased Travelling Time and Vehicle Operations Costs (VOC).

The primary objective of the proposed Expressway project between Kibaha and Morogoro is to reduce travel time and VOC. Its scope is to develop a Toll Expressway of 4 lanes dual carriageway (2 lanes in each direction) with a design speed of 120 km/hr from Kibaha to Morogoro (205 km). It will include modern rest areas at selected intermediate locations along the route, road service level that meets international standards, free interchanges and Toll Plaza with an e-tolling system at entry and exist points.

Three technical options were evaluated for achieving the project objectives namely: Option 1-Do nothing, option but maintain the existing facility, Option 2 -Widen the existing facility by adding two additional lanes at either sides of the existing highway, and Option 3 -Construction of a new Expressway on a new alignment. Based on the above analysis Option 3 is considered to be the best option for solving the prevailing traffic congestion along the Kibaha – Morogoro Highway section and attracts low cost of compensation compared to Option 2. In addition, two options for achieving project objective were assessed. The first option is traditional procurement method, which include Add-measurement Contract, Design and Build (lump-sum) Contract, EPC (lump-sum) Contract and the second option is PPP procurement method. Based on the risk levels criteria analysis in terms of financing, design, construction, operation, maintenance and environmental issues and consideration of Value for Money (VfM), the Public Private Partnership (PPP) was considered to be the best option.

The Institution has more than 7 staff with PPP basic skills and knowledge. On the other hand, the Agency has been receiving inadequate funds for PPP projects preparation and implementation, hence, it is reasonable to assume that the CA will not have the budgetary flexibility to ensure adequate funding for training and capacity strengthening of the Agency on PPP Projects preparation, Monitoring and Evaluation. This compels the need for allocation of more funds for the said purposes.

Based on the preliminary analysis of technical features, conceptual and design philosophy, the selected route/alignment for Kibaha – Mlandizi – Chalinze - Morogoro Toll Expressway is likely to be technically viable. The comprehensive assessment of technical features and Preliminary Engineering Design will be carried out during Feasibility Study.

Preliminary Economic Analysis of the project indicate that, in the last ten (10) years, traffic volume has increased by about 50 % from 13,001 AADT in 2011 to 22,780 AADT in 2020 in Kibaha TAMCO – Chalinze road section and from 4,376 AADT in 2016 to 7,699 AADT in 2018 in Chalinze – Morogoro road section. The annual average traffic growth rate is approximated at 3.30% corresponding to the volume of 54,264 veh/day. This approximation is based on the PPP Feasibility Study Report for the Dar – Chalinze Expressway (2016). The increase in traffic volume is attributed to population growth, GDP growth, and transit traffic from the neighbouring countries using the Tanzania Ports. Expansion of Port services along the Indian Ocean is another reason for increasing traffic volumes. Trend of traffic growth is likely to attract high competition from prospective investors to the proposed project.

The economic benefits of the project will include stimulation of socio-economic activities in the country, project salvage value after expiry of concession period and relief on government expenditure for construction of the project. The economic benefits for the project users will be in terms of time saving, saving on vehicle operation and maintenance costs, and reduction of accidents. Quantitative economic benefits will be determined during the feasibility study. Project cost has been estimated at TZS 2.0 trillion, of which TZS 1.4 trillion is construction cost, and TZS 0.6 trillion covers operation and maintenance costs. Accordingly, the project revenue is estimated at TZS 29.9 trillion

during the operation period of the project. Based on the preliminary Economic Costs and Benefits analysis the project is likely to be viable.

This project will be financed by the private party through SPV in a combination of debt to equity ratios of up to 80:20. In return, the private party will recoup its capital investment through user toll fees and rental charges. The proposed project structure will follow a project finance approach whereby the private party will incorporate a company in Tanzania (SPV) with the sole responsibility of design, build, finance, operate and maintain the proposed projects for the period of the concession. TANROADS will be responsible for signing PPP Agreement with the Project Company (SPV). In addition, TANROADS will be responsible for Monitoring and Evaluation of the project during Contract period and operation after asset hand over.

Preliminary Risk Identification and allocation analysis was done following the selected PPP model and it was observed that most of the significant risks are likely to be allocated to the private party. The identification and allocation of the risks, estimation of the probabilities of occurrence and risk mitigation measures are presented in the risk matrix appended to this Report. Further assessment of risks will be carried out during the feasibility study stage.

Likely Market Appetite Survey was conducted under the previous PPP Feasibility Study for Dar es Salaam – Chalinze Toll Expressway considering the three options, namely Option No. 1 (Traffic Revenue Risk allocated to the Private Party), Option No. 2 (Revenue Risk Shared between the Public and Private Party) and Option No. 3 (Traffic Revenue Risk allocated to the Public Party). Based on that Survey the third option was considered to be more attractive to prospective Investors.

The financial assessment covers the design, construction, operations and periodic maintenance of Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway (205 km) by considering 2 scenarios namely; Scenario 1: The Contracting Authority will sign PPP contract for the entire expressway from Kibaha – Mlandizi - Chalinze - Morogoro (205 km) and Scenario 2: The CA may consider splitting the project into 2 lots, namely Lot 1: Kibaha - Chalinze (85 km) and Lot 2: Chalinze – Morogoro (120 km). Based on the key assumptions considered in financial model, the financial analysis indicates that the proposed project is likely to be financially viable in both scenarios. To be viable with positive NPV of USD 1,994 million, strong IRR of 11.87% and Debt Service Coverage Ratio (DSCR) of 1.32x. In additional the payback period of the project will be on the 16th year of the concession period.

The financial assessment covers the design, construction, operations and periodic maintenance of Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway (205 km) by considering 2 scenarios namely;

- Scenario 1: Construction by using rigid pavement or flexible pavement with four lanes dual carriageway.
- Scenario 2: Construction by using rigid pavement or flexible pavement with six lanes dual carriageway.

The financial modelling indicates that both scenarios have strong positive NPVs of USD 1,994 million and USD 2,552 million, strong FIRRs of 11.87% and 12.15%, and the payback periods of 16 and 26 years for 4 and 6 lanes rigid pavement respectively. Hence the construction of four lanes rigid pavement is most financially viable.

The sensitivity analysis indicates that, the financial viability indicators are worsened when the extreme increase of the project cost and extreme deduction of traffic volume applied to the mode due to consideration of flexible pavements and SGR operationalisation. Reflecting that profitability of the project is sensitive to cost increase and decrease of traffic volume level, the Government may be required to provide financial support (Viability gap funding) or revenue guarantee.

Based on the Willingness to Pay (WTP) Survey, the Toll fee per km in Tanzania Shillings (TZS) was estimated at; Automobile 80, Bus – small 200, Bus – large 400, Goods Vehicle – Light 200, Goods Vehicle – Medium 280, Goods Vehicle – Heavy 360 and Articulated Truck 480. The analysis indicates that the Toll fee rates used in the financial model are affordable to the users and justifies for the financial viability of the project, hence financial support may not be required from the Government. Implementation of project through PPP will provide qualitative value for money in terms of skills, capacity, financing and impart knowledge and new technology on implementation toll expressway projects to local staff.

The community surrounding the Kibaha - Chalinze – Morogoro area were engaged through various meeting and individual interviews which involved a sample size of 150,000 people during a site visit. In response, the community supported the project and indicated their willingness to pay, though their concern was that compensation may not be adequate and timely paid. Another concern they had was that the introduction of toll fees may cause a raise of the fare and transport costs.

The Social and Environmental Assessment study was conducted along the Dar es Salaam - Kibaha – Chalinze corridor. A `Rapid Assessment` was used which involved quick social and environmental screening mainly through observation. Other approaches used to gather information were documentary reviews and public consultation meetings. Based on the study, the project is expected to have positive and negative environmental impacts on the adjacent local communities, both direct and indirect. The positive impacts shall be enhanced and negative impacts mitigated or minimised. The Environmental and Social Impact Assessment (ESIA) for the project will be conducted during feasibility study.

This project is supported by the Executive Agencies (Tanzania National Roads Agency) (Establishment) Order GN No 293 of 2000, the Roads Act No 11 of 2007, PPA Act 2011, Road and Fuel Toll Act CAP 220, PPP Act CAP 103 and their respective regulations. Hence, conceptualization of this project is in conformity with the above laws and other relevant statutory legislations and regulations of the United Republic of Tanzania.

The identified stakeholders include transport sector, financial institutions, regulators, approving authorities and other key stakeholders relevant to Public Private Partnership

(PPP) arrangement. These stakeholders were consulted to explore their interest and readiness to support the implementation of the proposed project. Further, engagement will be carried during the feasibility study. The stakeholders indicated readiness to support the project, although they were concerned with the unplanned budgets for relocating the utilities from the construction corridor. In addressing those concerns the CA has set aside funds to meet relocation costs for the same.

In the overall, the preliminary analysis has indicated that the proposed project is likely to be viable. However, there are several critical issues which need to be addressed during the feasibility study including among others: -

i. Comprehensive assessment of technical features and preliminary engineering design,
ii. Quantitative Cost Benefit Analysis (CBA),
iii. Quantitative Value for Money (VfM),
iv. Demand and Willingness to pay assessment and,
v. Environmental and Social Impact Assessment (ESIA) and Community Engagement.

The Proposed Action Plan for the preparation and implementation of the for the two options detailed in **Table 21** and summarized as follows: -

Option 1: **Entire project (Kibaha to Morogoro Expressway 205 km);**

i. Completion of feasibility study by procured PPP Advisor: 30th September, 2023
ii. Design Commencement Date: 01st March 2024
iii. Construction Commencement: 01st July 2024 (3 months after design commencement)
iv. Design Completion Date: 30th April 2025
v. Construction Completion Date: 30th June 2028 (Total construction period is 3 years)
vi. Operation Commencement date: 01st September 2028
vii. Concession End Period: 30th June 2053

Option 2 implementation in Two Lots: Lot 1: Kibaha to Chalinze 85km and Lot 2: Chalinze to Morogoro 120km (procured under single contract);

It is proposed that Lot 1 and Lot 2 will be procured under single contract, Lot 1 being unconditional part and Lot 2 being with conditions that the Commercial and Financial Closures will only be concluded after completion of the Feasibility Study for the Lot 2. Accordingly, the procurement schedule is proposed to be as follows: -

Lot 1: Kibaha – Chalinze (85 Km)

i. Completion of feasibility study by PPP Advisor: 30th December, 2022
ii. Design Commencement Date: 01st July 2023
iii. Construction Commencement: 01st October 2023 (3 months after design commencement)
iv. Design Completion Date: 30th June 2024

v. Construction Completion Date: 30th September 2025 (Total construction period is 2 years)
vi. Operation Commencement date: 01st October 2025
vii. Concession End Period: 30th June 2050

Lot 2: Chalinze – Morogoro (120 Km)

i. Completion of feasibility study by TA: 30th September, 2023
ii. Design Commencement Date: 01st March 2024
iii. Construction Commencement: 01st July 2024 (3 months after design commencement)
iv. Design Completion Date: 30th April 2025
v. Construction Completion Date: 30th June 2027 (Total construction is 3 years)
vi. Operation Commencement date: 01st July 2027
vii. Concession End Period: 30th June 2052

CHAPTER 1: BACKGROUND

1.1 Introduction

Tanzania National Roads Agency (TANROADS) is established by the National Agencies Establishment Order, GN. 293 of 2000 as amended. TANROADS operates as semi-autonomous under Ministry of Works and Transport with mandates of day-to-day development and maintenance of national road network, operation and managing of weighbridge stations, design and development of airports in the country. Pursuant to Section 6 (2) of the Road Act 2007, TANROADS has a function to negotiate Concession Agreements with private party entities to facilitate financing and development of selected roads in accordance with guidelines prescribed by the government.

Development and implementation of Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway (205 km) through PPP arrangement falls under the TANROADS core functions. The proposed project is expected to achieve viability, fiscal affordability and explore value for money. As of December 2021, the coverage of the national road network was 36,361.95 km out of which 11,186.16 km is paved. The network comprises of 12,215.58 km Trunk Roads of which 9,058.22 km is paved and 3,157.36km is unpaved and 24,146.37 km Regional Roads of which 2,127.94 km is paved and 22,018.43 km is unpaved.

TANROADS **Vision** is to be a World Class Agency dedicated to providing a connected and sustainable all weather national road network and airports and its **Mission** is to manage national roads network and airports development by planning, designing, construction and road maintenance for socio- economic development through a competent workforce.

TANROADS is implementing 5 strategic objectives in its Sixth Strategic Plan, which include among others, improved National Road Network and Airports, Resources Management and Institutional capacity to deliver services. The Kibaha - Chalinze - Morogoro Toll Expressway is among the key Strategic Projects planned to address congestion in Dar es Salaam, Coast and Morogoro Regions in the TANROADS 6th Strategic Plan 2021/22 – 2025/26 and in the Five National Five Year Development Plan 2021/22 – 2025/26.

In undertaking its roles and functions, TANROADS will uphold the following **core values**:

Customer focus: Responsive to our customers' needs whilst observing laws of the land.

Innovation: Creative, examine options, challenge assumptions, and ensure value for money.

Excellence: Exercise competency through professionalism and ethical conduct.

Integrity: Honest and trustworthy

Transparency: Fulfil roles and responsibilities in an open and accountable manner to the public

Teamwork: Collaborative and accountable manner with openness in a conducive and transparent environment realizing that output comes from contribution of many

Non-discrimination: Observe equal opportunity and treat internal and external stakeholders without discrimination against gender, religion, race affiliation and ethnicity.

1.2 Project Context

Overview of Transport Sector

The management of roads in our country started during the colonial era under the Germany rule although their system was not well defined. In early 1920s, the British colonial administration formed a department known as Public Works Department (PWD). PWD was responsible for water supply and sewerage, storm water management and drainage, roads and bridges as well as provision of electricity. After independence of Tanganyika in 1961, the functions of PWD were distributed into various Ministries. In this restructured system the function of roads management was placed under the Directorate of Roads in the Ministry of Works for Tanganyika.

In furtherance of roads improvement, the Government of Tanzania Mainland initiated and implemented two Road Sector Reforms. The first reform was done through Integrated Road Project – IRP I in 1990 while the second phase was referred as Integrated Road Project II - IRP II in the year 1995. These reforms had a view to transform the Directorate of Roads into an autonomous and commercially oriented

agency. The main aim of these reforms was to deliver higher quality services to the public, with efficiency, effectiveness and the highest standard of courtesy and integrity.

At this juncture, the Roads Directorate under the Ministry of Works was hived off to form Tanzania National Roads Agency (TANROADS) established through an order known as the Executive Agencies (Tanzania National Roads Agency) Establishment Order, GN. 293 published on 1st July, 2000.

Development of Transport Sector

The transport system in Tanzania consists of five modes comprising roads, rail, water, air and pipelines. The transport system has its roots in the colonial period over a century ago when the sea ports provided the international gateways and railways were built into the interior to provide access for both trade and administrative purposes. Inland ports were also constructed on the great lakes to facilitate trade with neighbouring countries.

The Roads have only gained importance in the past 50 years as road transport became more affordable and became an important feature of a market economy. A high proportion of the road infrastructure was not modernised over time due to limited resources to invest and a large amount of infrastructure is now beyond its economic life. Lack of timely maintenance resulted in rapid deterioration of the roads infrastructure and this imposed high costs on the economy a trend that continues to date. The existing roads infrastructure does not serve the modern days needs of the economy which requires transport infrastructure to be upgraded and improved over large areas of the country. During the past two decades, significant progress has been made, particularly in the roads subsector, but considerable investment is still required to deliver improved transport services to meet the growing needs of the economy and the region which it serves.

Tanzania is the international gateway for several land linked neighbouring countries. Burundi, Rwanda, Uganda, DR Congo, Zambia and Malawi are dependent to some extent on the country’s transport network for their access to global markets. For Tanzania, facilitating this access is not only good neighbourliness but is also good business as the provision of transport services is also a potential source of revenues and a catalyst for accelerating development. The Tanzania National Development Strategy

emphasises that extensive and efficient infrastructure is critical to ensure the effective functioning of the country's economy. As a result, a sizeable share of new commitments is being directed to infrastructure investments with a focus on reducing travel times between regions, integrating the national market and connecting it to other markets in the East and Central African Communities. These initiatives will create a positive impact on national competitiveness, growth and regional integration.

Road Network in Tanzania

The establishment of TANROADS in 2000 enhanced implementation of special projects initiated by the Ministry of Works aiming at joining all regional headquarters with paved roads. The implementation of that special projects culminated into construction of a total of 223 km along Mtwara corridor to join Dar es Salaam, Lindi and Mtwara regions and 455 km along the Central corridor to join Dodoma, Singida, Tabora, Shinyanga, Mwanza, Geita and Kagera regions.

The funds for the special projects were sourced from Government budget. To-date, almost all regional headquarters have been connected by paved roads using the Government budget, Donor funds and credits lines from International Financial Institutions. However, there are pending projects to connect the remaining Regions Headquarters due to budget constraints.

Other policies, programmes and strategies implemented by TANROADS include but not limited to Five Years Development plan, National Transport Policy, Government Development Vision 2025 and Special Development Programme. This resulted into increase of paved national road network from 1,300 km in 1961 to 11,186.16 km in 2021.

Given the budget constraints and unreliable donor funds, the ministry of works through TANROADS had opted for an alternative financing for the road projects which consider innovative financing mechanisms which offer broader alternatives to the traditional financing. Therefore, TANROADS has identified Kibaha - Chalinze - Morogoro Expressway (205km) to be implemented under PPP arrangement so that it can benefit from innovation and financing from private sector. Under that arrangement the project will be financed by the private party and in return the private party will recoup its capital investment and projected profit by user toll fees. The project is among the key Strategic

Projects planned to address congestion in Dar es Salaam City in the TANROADS 6th Strategic Plan 2021/22 – 2025/26 and in the Five National Five Year Development Plan 2021/22 – 2025/26.

1.3 Problem Need and Problem Statement

The current improvement of Kimara-Kibaha road (19.7 km) to 8 lanes significantly shifted traffic congestion to the Kibaha to Morogoro road, which is a single carriage way and its service level poor. This has significantly affected Travelling Time and Vehicle Operations Costs (VOC). Consequently, causing delays on transportation of agricultural goods and industrial produce to reach their destinations in time, increase and unpredictable price of goods, denial of general public to access social services in time. In addition, accelerate environment degradation due to smoke and sound emissions from slowly moving trucks. These effects might jeopardise health and social-economic activities of the people residing near the congested road.

According to the study made by TANROADS along Kibaha-Morogoro road considering heavy trucks travelling at speeds ranging from 10km/hr to 120km/hr, it was noted that for the speed below 100 km/hr, the VOCs increase as a speed decreases. However, for the speed above 100 km/hr the VOC is increasing at decreasing rate and time is saved. Furthermore, for the highway with operation speed of 100km/hr travel time is about 2hrs. However, following the current condition and congestion of the Kibaha – Morogoro highway, travelling time is around 4hrs. The increase of traffic volume is mainly due to increase of economic activities within the country and the neighbouring countries. The current travel time from Kibaha to Morogoro is 4 hrs whereas if the expressway is provided travel time will be reduced to 2 hrs.

The proposed project intends to reduce travel time and vehicle operation costs which in turn will ensure that agricultural goods and industrial produce will reach their destined markets on time and at reasonable cost. This will guarantee availability of goods and produce on markets at reliable and predictable price. The project will also improve quality of environment near the congested roads which in turn will reduce health risks by reducing mortality and improvement of social economic activities for the general public at large.

1.4 Review of International Experience

Implementation of PPP projects in the transport sector is not a new phenomenon since it has been practiced in several countries. Tanzania can draw best practices and lessons from PPP Projects in the two East African Community Partner States Kenya and Uganda. Additional International experience will be explored from other Countries during Feasibility Study.

Experience from Kenya

Kenya is currently implementing Nairobi Expressway (JKIA–Westlands Highway 28.9km) Project under PPP arrangement. This is a toll road which connecting Jomo Kenyatta International Airport to the neighbourhood of Rironi, in Kiambu County, along the Nairobi-Limuru Road will reduce commuting time from 60minutes to 15minutes. The objective of the project is to ease traffic congestion from Jomo Kenyatta International Airport that accesses Nairobi city centre and to facilitate traffic flows from Nairobi CBD so that to reduce the number of departing passengers who miss their fights, while stuck in road traffic jams on the city streets. The scope of works includes expansion of the existing road to four-lanes one-way, (8 lanes total), with foot paths, drainage channels, overpass bridges and street lighting.

The Kenya National Road Authority entered into PPP agreement with China Road and Bridge Corporation (CRBC) to build, Operate and Maintain the toll road expressway (flexible pavement) with a concessional period of 30-years including 3-years of construction for the capital investment of USD 560 million. The cumulative ESAL loads of the project determined as 25 to 60 Million times from projection year 2023 to 2037. The project was financed by CRBC through a credit facility from Government of China under Guarantee of Kenya Government. In return CRBC will recoup its investment from User fees, then the road will revert to government of Kenya after concession period.

1.5 Lessons Learnt and Good Practices from Kenya

Kenya has a well-structured PPP institutional arrangement which comprises of PPP units under the Kenya National Road Authority with direct reporting line to the PPP Committee and the Principal Secretary/National Treasury, respectively. This structure helped to ensure an effective engagement with other stakeholder in management of the project.

Financial Support for PPP capacity building: in 2013 the Government of Kenya received a credit of $40 million from the World Bank to assist it in creating a bankable pipeline of PPP projects. This support has gone toward creating the necessary capacity of the PPP Unit, strengthening the PPP institutions established under the PPP Act, and hiring transaction advisors for the first mover PPP projects.

During the implementation of the Nairobi expressway, the CRBC encountered the problem of relocation of public service utilities from the construction corridor and encroachment of the right of way.

The inception of the PPP project had strong support from policy makers facilitated timely budget support, capacity building for preparation and approval processes of the project implementation and commitment to galvanize citizenry support for a proposed project.

Experience from Uganda

Uganda is currently implementing two expressways namely; Kampala -Jinja Expressway (Jinja–Kampala Expressway 77 km) project under PPP arrangement. This toll expressway linking Kampala city with Jinja city in the Eastern Region of Uganda and Kampala – Entebbe (54km) Scope of the Project include construction of 4-lanes expressway, dual carriageway, with limited access.

The Uganda National Roads Authority (UNRA) entered into PPP agreement with China Communication Construction Company (CCCC) to build, Operate and Maintain the toll road expressway (flexible pavement) with a concessional period of 25-years including 3-years of construction for the capital investment of USD 476 million. The cumulative ESAL loads of the project determined as 25 to 60 Million times from projection year 2023 to 2037. Construction of Kampala –Jinja Expressway (77km) has successfully completed and its operation has commenced. However, the completion of construction and operation of Kampala – Entebbe Expressway (77km) had delayed due to poor community engagement in land acquisition process.

The project was jointly financed by the Chinese Exim Bank and the government of Uganda whereby Exim Bank provided a credit facility of $350m (repayable in 25years) and Uganda Government contributed $126m.

Lessons Learnt and Good Practices from Uganda

The inception of Kampala – Jinja Expressway (77km) under PPP arrangement had strong support from policy makers facilitated timely budget support, capacity building for preparation and approval processes of the project implementation and commitment to galvanize citizenry support for a proposed project and it was successfully completed. However, the Kampala – Entebbe Expressway (54km) faced some challenges due to poor involvement of stakeholders which contributed to delay the implementation of the project.

1.6 International Experience in comparable PPPs within the Sector

a. Dedicated and capacitated Road authority linked to the PPP institutional arrangement;
b. Government support on PPP projects including financial and administrative support such as sensitization of the communities. In the case of Kenya, the project was financed by the private party through a credit facility from Chinese financial Institution under the sovereign Guarantee from the Government of Kenya while in Uganda the project was jointly financed through credit facility from Chinese institution with contribution from the Government. Therefore, the support from the government for successful implementation of Kibaha- Chalinze – Morogoro is important. However, the nature of the support which may be required will be determined during feasibility study.
c. Proper engagement of community and relevant stakeholders, particularly during preparation of PPP project is crucial. Given the experience from Uganda proper engagement of Community should be done prior to implementation to address grievances that might be raised at early stages of the project.
d. The Projects in Uganda and Kenya were constructed by using flexible pavements which correspond with ESAL ranging from 20 - 60 million while ESAL for Kibaha – Morogoro Expressway was project to 121- 321 Million which compelled Tanzania to opt for rigid pavement.

CHAPTER 2: PROJECT DESCRIPTION

2.1 Project Scope

The scope of the project is to develop a toll Expressway of 4 lanes dual carriageway (2 lanes in each direction) with a design speed of 120km/hr from Kibaha – Mlandizi - Chalinze – Morogoro (205 km). It will include modern rest areas at selected intermediate locations along the route, road service level that meets international standards, free interchanges and toll plaza with e-tolling system at entry and exist points.

The project will be implemented under the PPP arrangement where road users will be charged for the use of the road. The proposed toll expressway will be constructed on new alignment parallel to the existing Morogoro road. The existing Morogoro road will continue to be in optimal use to allow traffic and other road users who may not be willing to pay toll. The new alignment has taken due consideration of the technical, economic, financial, environmental and social issues.

2.2 Project Location

2.2.1 Geographical Location

The Kibaha – Mlandizi – Chalinze - Morogoro expressway (205km) will form part of the TANZAM highway. The expressway starts from Kibaha District (TAMCO Area) in Coast region, traverses through Chalinze and Morogoro town Districts to Sangasanga area in Morogoro Region. The road project includes three spur roads that connect Mlandizi, Kwala Dry port and Kinguruwila township. The project starting point is at TAMCO (Kibaha Township) on existing Morogoro road and traverses on south direction and runs parallel to the existing road. At Mlandizi, the road the road crosses the existing Morogoro road Northwards, and traverses parallel to existing road via Chalinze to Sangasanga in Morogoro region.

2.2.2 Site Suitability and Geographical location

The road project site is selected by considering its suitability in Topography, Drainage and Climates Condition. The road will be constructed along hilly and rolling terrain in coast belt rises from 100m to 480m and is dominated by sandy loam and clay which is

advantageous in optimization of the design in the context of drainage, road geometry etc. The lowland areas contain rivers that discharge their water to the Indian Ocean.

The project route is parallel to the existing Morogoro road which is also advantageous due to existence of source of materials such as gravel, sand, aggregates and water from nearby borrow pits and quarries which were used during construction of the existing Morogoro road. Also, the proposed site is easily accessible through the existing Morogoro road as it will enable haulage of construction materials such as cement, reinforcement and equipment that are purchased from Dar es Salaam and or imported outside the country. On the other hand, the existence of health centres and referral hospital is another advantages to private investor in this project. The project is near to Dar es Salaam city where labour force is abundant, therefore the private investor may not use more effort during mobilization of staff. All these are additional advantages to the prospective investors who may wish to develop this project under PPP arrangements.

2.2.3 Climate Condition

The Coast Region experiences three distinct seasons; dry season extending between May and October, and two rainy seasons, heavy rainfall covers 120 days between March and June every year, light rainfall is received for 60 days and common from October to December each year. The annual rainfall ranges from 700mm to 800mm. High temperatures occur during December and low temperatures occur during the month of July. According to meteorological statistics the average temperature for the area is about 28^{o} Celsius.

2.3 Objectives

The project primary objective is to decongest traffic from Kibaha to Morogoro by development of a four lanes toll Expressway (205km) with design speed of 120 km/hr in order to reduce travel time and vehicle operating costs hence fostering socio-economic development.

2.3.1 Expected outputs of the Project

The expected outputs of the project will include a modern 4 lanes carriageway toll Expressway with a driving speed of 100km/hr, modern rest areas at intermediate

locations along the route, road service level that meets international standards, interchanges and e-tolling system at entry and exist points.

2.4 Beneficiaries

Beneficiaries of the Kibaha – Chalinze – Morogoro Toll Expressway include but not limited to the following: -

i. Private party will earn return on investment and improve investment profile.
ii. Road User will save travel time, reduce vehicles operating costs, will have alternative route, improve safety and health, improve access to social services and increasing business profit.
iii. Government will improve road services, reduce congestion, increase government asset, increase revenue, employment, innovation, poverty reduction, improved productivity and promote economic developments of the nation.
iv. General public benefit from reduced logistic cost, improved access to social services, employment and improved social economic activities.
v. Project workers will benefit from employment, training, remuneration and knowledge transfer.
vi. The project will increase land value and give an impetus to the real-estate sector in the surrounding areas.
vii. The project will reduce congestion and improve access to neighboring countries of Kenya, Uganda, Rwanda, Burundi, DRC Congo, Zambia and Malawi hence promoting investment and trade.

The project will be constructed in the new alignment where community have properties and undertaking economic activities. Therefore, implementation of the project is likely to affect economic activities and properties owned by the community surrounding the project corridor and ecosystem.

2.5 Project Need Analysis

The current improvement of Kimara-Kibaha road (19.7 km) to 8 lanes significantly shifted traffic congestion to the Kibaha to Morogoro road, which is a single carriage way and its service level poor. This has significantly affected Travelling Time and Vehicle Operations Costs (VOC). Consequently, causing delays on transportation of

agricultural goods and industrial produce to reach their destinations in time, increase and unpredictable price of goods, denial of general public to access social services in time. In addition, accelerate environment degradation due to smoke and sound emissions from slowly moving trucks. These effects might jeopardize health and social-economic activities of the people residing near the congested road.

According to the study made by TANROADS along Kibaha-Morogoro road considering heavy trucks travelling at speeds ranging from 10km/hr to 120km/hr, it was noted that for the speed below 100 km/hr, the VOCs increase as a speed decreases. However, for the speed above 100 km/hr the VOC is increasing at decreasing rate and time is saved. Furthermore, for the highway with operation speed of 100km/hr travel time is about 2hrs. However, following the current condition and congestion of the Kibaha – Morogoro highway, travelling time is around 4hrs. The increase of traffic volume is mainly due to increase of economic activities within the country and the neighboring countries.

TANROADS is implementing 5 strategic objectives in its Sixth Strategic Plan, which include among others, improved National Road Network and Airports, Resources Management and Institutional capacity to deliver services. The Kibaha - Chalinze - Morogoro Toll Expressway is among the key Strategic Projects planned to address congestion in Dar es Salaam, Coast and Morogoro Regions in the TANROADS 6th Strategic Plan 2021/22 – 2025/26 and in the Five National Five Year Development Plan 2021/22 – 2025/26.

The proposed project intends to reduce travel time and vehicle operation costs which in turn will ensure that agricultural goods and industrial produce will reach their destined markets on time and at reasonable cost. This will guarantee availability of goods and produce on markets at reliable and predictable price. The project will also improve quality of environment near the congested roads which in turn will reduce health risks by reducing mortality and improvement of social economic activities for the general public at large. The current travel time from Kibaha to Morogoro is 4 hrs whereas if the Expressway is provided travel time will be reduced to 2 hrs.

The financial assessment carried out covers the design, construction, operations and periodic maintenance of Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway (205 km) by considering 2 scenarios namely; Scenario 1: The Contracting Authority will sign PPP contract for the entire expressway from Kibaha – Mlandizi - Chalinze - Morogoro (205 km) and Scenario 2: The CA may consider splitting the project into 2 lots, namely Lot 1: Kibaha - Chalinze (85 km) and Lot 2: Chalinze – Morogoro (120 km). Based on the key assumptions considered in financial model, the financial analysis indicates that the proposed project is likely to be financially viable in both scenarios. To be viable with positive NPV of USD 1911, strong IRR of 11.87% and Debt Service Coverage Ratio (DSCR) of 1.25x. In additional the payback period of the project will be on the 16th year of the concession period.

2.6 Option Analysis and Justification for Preferred Option

2.6.1 Options for achieving the Project Objective

Three technical options were evaluated for achieving the project objectives namely:

Option 1- (Do nothing) the CA will maintain the status quo but continue with maintenance of the existing highway using budget funds. The advantages of this option include improved riding quality, low level of investment, little or no requirement for new technology or management capacity, minimal relocation cost for services and utilities and low or no land acquisition costs. However, its disadvantages include absence of significant change level of service.

Option 2-Widening of the existing Highway, this option involves widening of existing highway from 2 lanes to four lanes through the government budget. The advantages of this option includes significant improvement in the level of service relative to option 1. In addition, it allows utilization of the existing acquired corridor hence lowering the land acquisition costs. However, its flexibility in traffic flow and decongestion is very minimal.

Option 3-Construction of new Expressway on a new alignment.

This option involves construction of a new expressway on the new alignment parallel /away from the existing highway and it will be a toll road where people will be charged for the service, and this will be funded by private investor

This option ensures optimal road service provision compared to Option 1 and 2 hence achieve the intended decongestion objective. In addition, it has a lower cost of compensation for land acquisition compared to Option 2. However, it is likely to attract higher investment cost.

Based on the above analysis Option 3 is considered to be the best option for solving the prevailing traffic congestion along the Kibaha – Morogoro Highway section and attracts low cost of compensation compared to Option 2.

2.6.2 Pavement and number of lanes selection

The analysis carried out based on the applicability of the pavement type, operation of the SGR and possibility of considering six (6) lanes instead of the duly opted four (4) lanes expressway, indicates the following:

Rigid Pavement Scenario

The projected traffic loading along Kibaha – Morogoro road, ranges from of 121 million to 321milions based on the forecast traffic for 25 years (Year 2022 - 2046) based on the Feasibility Study Report for the Dar es Salaam – Chalinze Expressway (2016), which exceeds the maximum range (20- 50 million) specified in the Tanzania Pavement and Materials Design Manual 1999, i.e. >TLC50 and for the AASHTO standards i.e. >TLC 80, hence rigid pavement should be used.

Increased Number of Lanes Scenario

The number of lanes has been selected based on the forecast traffic for 25 years (Year 2022 - 2046), Average service time (required to collect fee) and Average waiting vehicles. The traffic volume is estimated for the base year 2022 to 2046, and the annual average growth rate is 3.30%.

The volume is 54,264veh/day, according to the Dar – Chalinze expressway PPP Feasibility Study, (2016) and 4 lanes were considered suitable for this section.

Considering Six (6) lanes, will significantly increase the project CAPEX which will be economically unjustifiable as the forecasted traffic will remain the same level during the concession period of 25 years or may be less when considering operationalization of the SGR.

Possibility of reducing traffic with the coming SGR and flights by 40-50% may significantly change the proposal from rigid to flexible pavements although there are many risks of using Flexible pavements over Rigid pavement in terms of Maintenance and Lifespan

Maintenance and Lifespan

Cost for Routine maintenance and Periodic Maintenance of flexible pavement is higher than Rigid pavements under the same conditions. When placing rigid pavements, it might not require frequently major maintenance or full Rehabilitations while Flexible pavements may require major Maintenance or Rehabilitations before and after its life span depending on to loading effects and other weather conditions and this will disrupt traffic flow and affect revenue collections.

Rigid Pavement is more feasible than Flexible Pavement in long service life. This is due to the fact that, cost of project maintenance is higher compared to rigid pavements since the lifespan of flexible pavement is shorter, so that it will need replacement in a short period before the end of concession period. Life span for rigid pavements can go up to 35 years while flexible pavements is only 20 years which will require full rehabilitation before end of concession period.

2.6.3 Project Delivery Options

Two options for achieving project objective were assessed. The first option is traditional procurement method which include Add-measurement Contract, Design and Build (lump-sum) Contract, EPC +F (lump-sum) Contract and the second option is PPP procurement method. Based on the risk levels criteria analysis (**Table 2.4**) in terms of financing, design, construction, operation, maintenance and environmental issues and consideration of Value for Money (VfM), the Public Private Partnership (PPP) was considered to be the best option.

Table 2.4 Analysis of section 3 Chalinze – Morogoro

Evaluation criteria	Project Delivery Method			
	Traditional			PPP
	Add Measurement	**EPC+ F (Lump sum)**	**Design and Build (Lump sum)**	**DBFOMT Model**
Finance Risk	CA	CA	CA	PS
Design Risk	CA	PS	PS	PS
Construction Risk	PS	PS	PS	PS
Operation Risk	CA	CA	CA	PS
Maintenance Risk	CA	CA	CA	PS
Environmental Risk	CA	PS & CA	PS/CA	PS/CA
Total Score	**5**	**4**	**4**	**1**

Note1: Private sector (PS), Contracting Authority (CA) & 2: Scale {5 Very High: 4 High; 3 Medium; 2 low & 1 Very Low]

Out of the two methods of project delivery compared, the PPP project delivery method was ranked with low risk to the Contracting Authority (CA). Therefore, the Public Private Partnership (PPP) was considered to be the best option for delivering the Kibaha – Chalinze – Mlandizi – Morogoro road project.

2.7 Project Administration and Institutional Capability

This section provides an overview of the Agency's applicable institutional structure, its preparedness for public private partnership (PPP) projects, and its ability to execute the relevant PPP Project efficiently.

2.7.1 Project Administration

A designated PPP desk established at the Ministry of Works and Transport (Works) and TANROADS with responsibilities of coordinating preparation and implementation of the Kibaha – Morogoro Expressway project under PPP arrangement. In additional the Accounting Officer of the CA has appointed the Project Officer and constituted a Project Management Team (PMT) with functions outlined hereunder.

The functions of the project officer shall include: -

1. Day to day supervision of the project;
2. Be liaison officer between the accounting officer, project management team, PPP Centre and private party;
3. Preparation of periodic, quarterly and annual reports on the development of the project;
4. Maintaining records related to project implementation from initiation to conclusion; and
5. Management of the public private partnership agreement and its implementation and hand-back.

The responsibilities of the PMT includes among others: -

i. To advise the accounting officer as regards project feasibility study, procurement, agreements and project implementation;

ii. To assist in mobilization of human and financial resources necessary for project implementations;

iii. To ensure the project is properly monitored and evaluated in accordance with the project agreements.

2.7.2 Institutional Capacity of the Agency

Qualifications and training in PPPs: The Institution has more than 10 staff with PPP basic skills and knowledge. Further formal and on-job training on PPP aspects is required for managing complexity of PPP projects.

Budget allocation: The financial capability assessment reveals that, the agency, has been receiving inadequate funds for development projects. Therefore, it is reasonable

to assume that the CA will not have the budgetary flexibility to ensure adequate funding for a robust PPP Project preparation, Monitoring and Evaluation.

2.7.3 Preparedness of Agency for PPP projects

The Agency is highly committed for implementation of the Project so that its intended objectives are timely attained. The Agency currently have well-defined plans to deal with project management, stakeholder consultations, or implementing external connectivity for the project. However, the Agency will require considerable technical assistance to successful preparation and implementation of the project.

The agency will support the project by providing the right of way free from any encumbrance to construct the expressway. It will also facilitate the project in terms of registration, licenses, permits and any other government approvals. TANROADS will have an oversight function on the project preparation which will include feasibility study, detailed engineering design, negotiation of the PPP Agreement, construction, maintenance, operation and hand back of the project. At the end of the concession period, the private party will transfer all physical assets mentioned above and relevant facilities to the Contracting Authority in good condition.

TANROADS has conducted preliminary consultation with key stakeholders including among others land owners, utility companies to assess their readiness to support implementation of the project and their response was positive. In addition, awareness campaign has been conducted to the community surrounding the project corridor. Initial estimates for compensation of land owners and relocation of utilities have already been established.

CHAPTER 3: PRELIMINARY TECHNICAL ANALYSIS

3.1 Technical Specifications of Required Facilities

This chapter provides technical standards and specifications that will be used in design, construction and operation. This of the proposed Kibaha - Morogoro expressway (205km) project.

3.2 Technical Features

Kibaha – Mlandizi – Chalinze - Morogoro road is designed to have the following features:

i. Four lane carriageway with 205 km length
ii. Eight entry/exit
iii. Three major Reinforced Concrete bridges
iv. Eight overpasses
v. Six Interchange
vi. Rest areas at the entry/exit
vii. Eight pay plaza with e-tolling system
viii. Underpass at all existing small roads and at Ruvu Ranch
ix. Control Centre

3.2.1 Access to Construction Materials

Since the project is passing almost to the same alignments of the existing Dar es salaam-Morogoro the availability of all construction materials like sand, water and gravel is available. The big part of the project is concrete works which will require aggregates and cement, all this are available at Lugoba Quary and Twiga cement if seem to be necessary to be utilized on these sources.

3.2.2 Access to Electricity

Access to electricity is an essential feature of during mobilization, construction and operation of proposed expressway. The existence of reliable electricity covered in all area along the proposed road section widens the potential primary need of the investor of any project. For smooth running during operation of the project, electricity should be available during all the time. In the event of outages, standby generators are available to run immediately.

3.2.3 Access to Water

Water quality and availability in the road project is essential factor construction and operations of this road section. The presence of portable and reliable water throughout the year of Ruvu River and other small streams along project is also potential for initializing this project. Staff during construction, operation and maintenance also require a constant supply of safe and clean water.

3.2.4 Access to Roads

Good road networks are essential during construction activates and other stakeholders. This link is also required to transport construction materials and labour force to site. The existing Morogoro road will facilitate accessibility to the project site.

3.2.5 Access to ICT

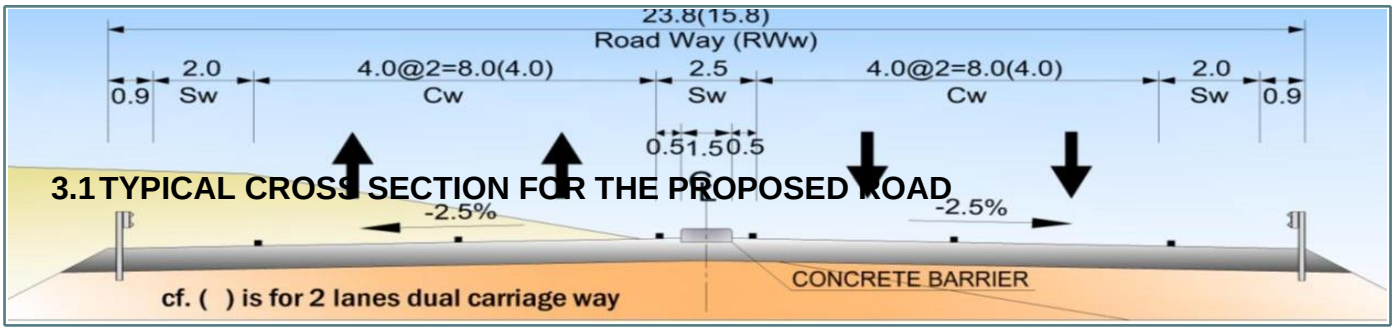
Good ICT networks are essential during construction and operation for communication. The existence of National Fibber Optic Broad Band System parallel to Morogoro road will facilitate reliable accessibility to ICT services to the project site.

3.3 Conceptual Design and Philosophy of Design of the Project

3.3.1 Conceptual Design

The conceptual design aims to cover and maximize the service level of the road infrastructure while considering the practical requirements of the facility in order to achieve the most effective road transport solution. The proposed conceptual design has considered achievement of optimal functional use, aesthetics and quality of road facility. The existing road will link traffic from the neighbouring towns to the expressway and will be used as an alternative route to the toll expressway.

Figure 3.1: Conceptual Design



3.1 TYPICAL CROSS SECTION FOR THE PROPOSED ROAD

Figure 3.2: Total four (4) lanes with two (2) lanes for each direction have been planned for toll plaza. One lane of weight bridge is designed at the entry side based on the traffic analysis.

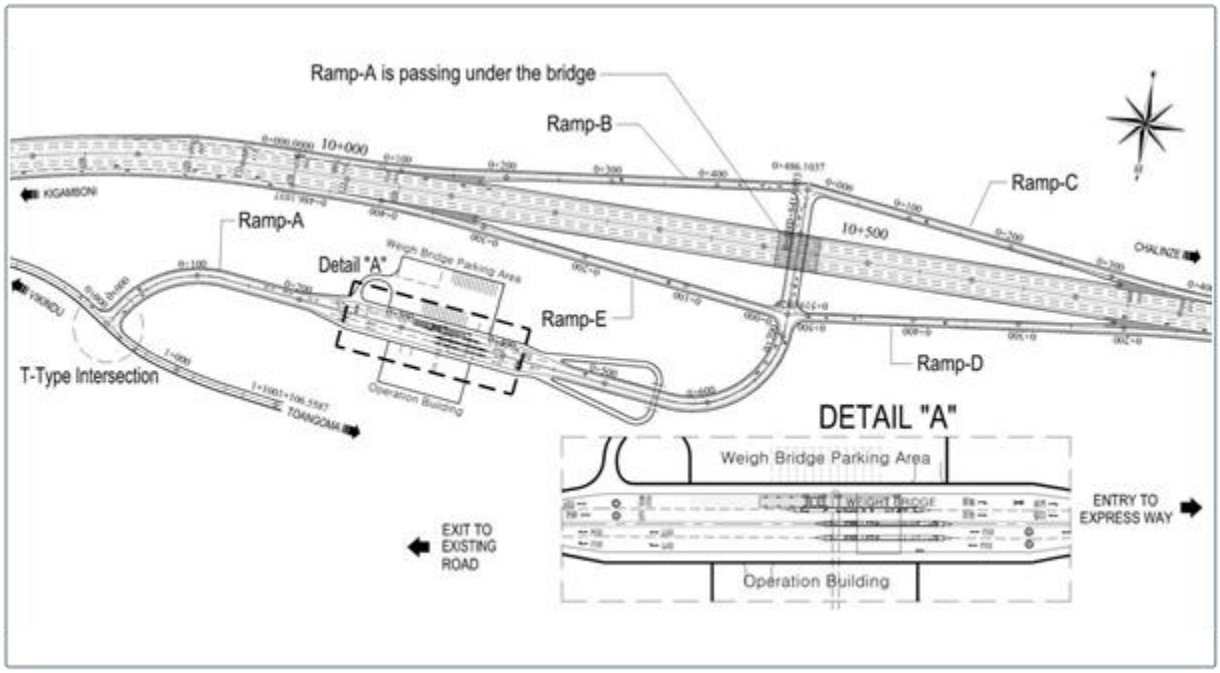


Figure 3.3: Tollgate

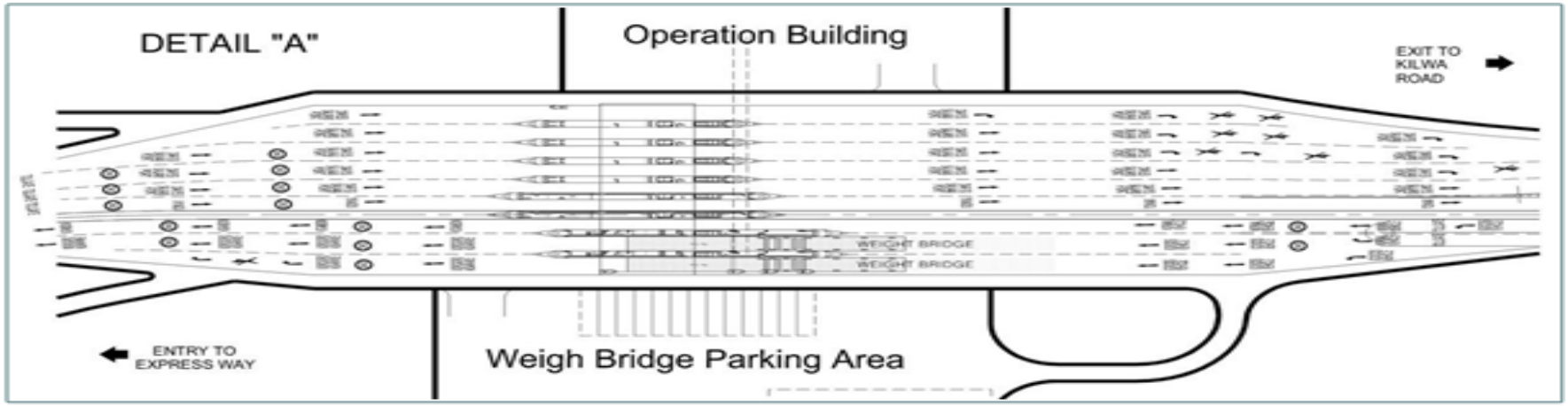


Figure 3.4: Malandizi Interchange and Tollgate

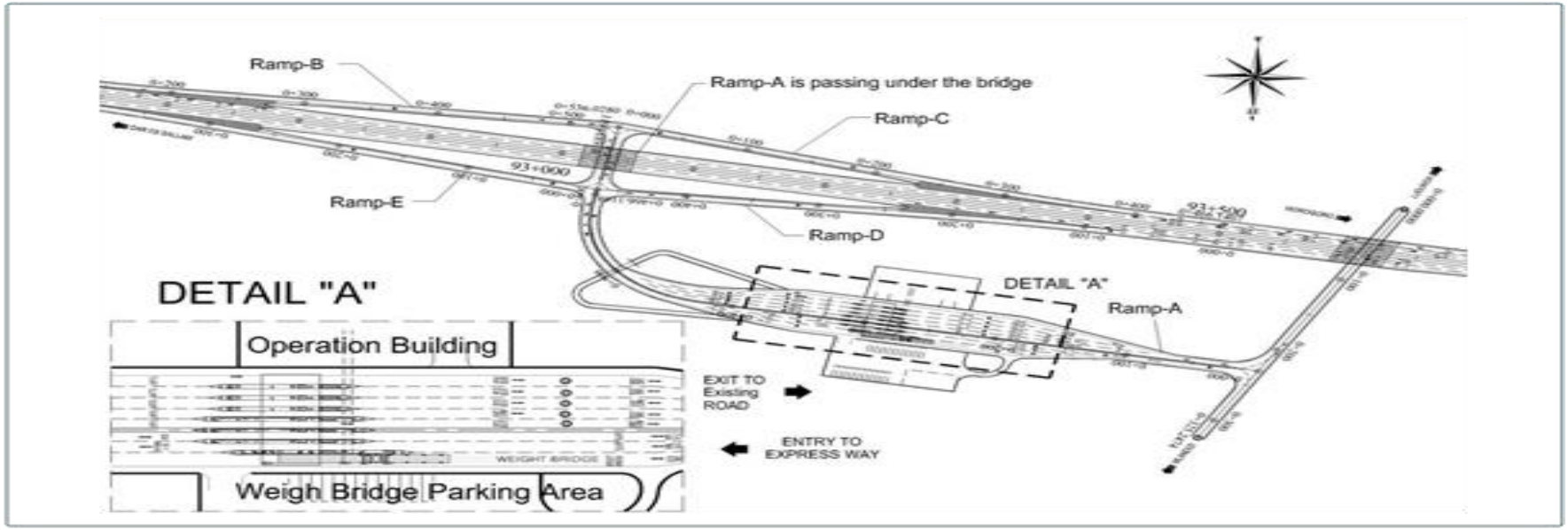


Figure 3.5: Layout for Truck Rest Areas

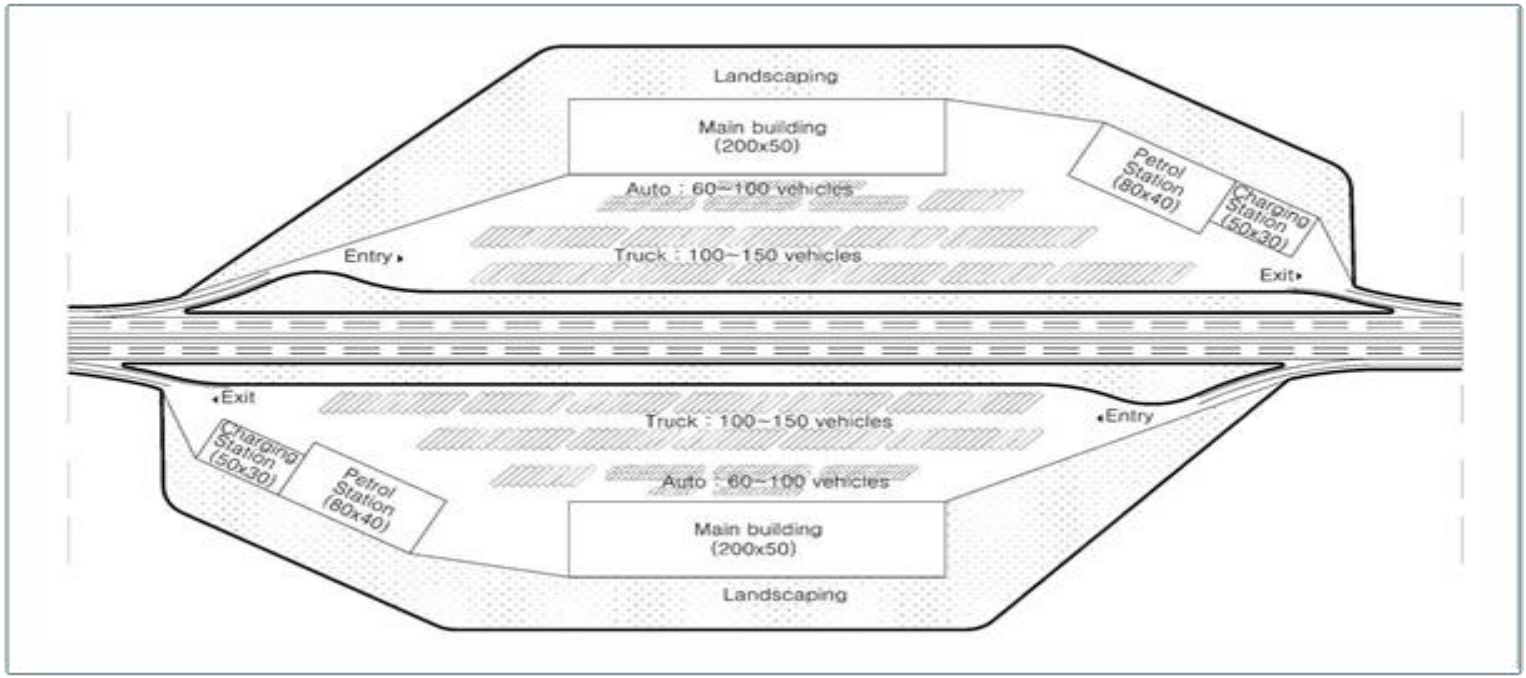


Figure 3.5: Chalinze Interchange No.1

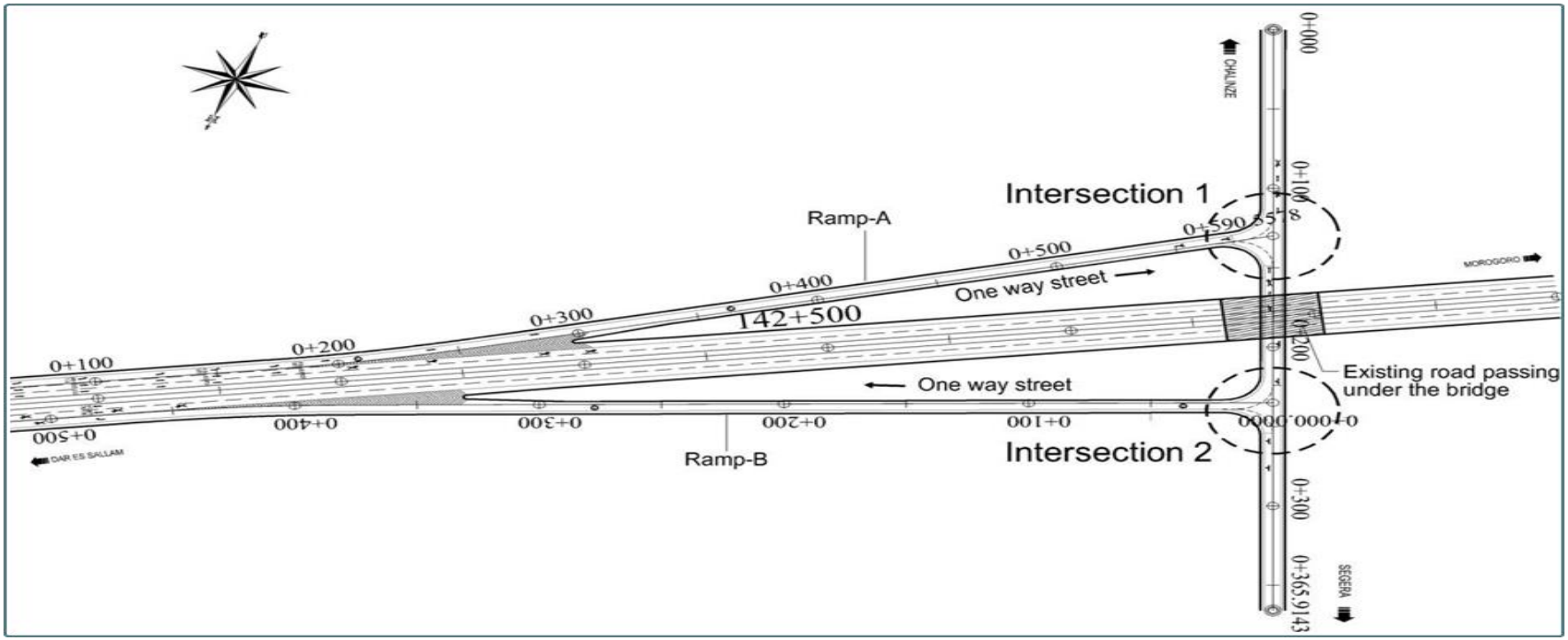
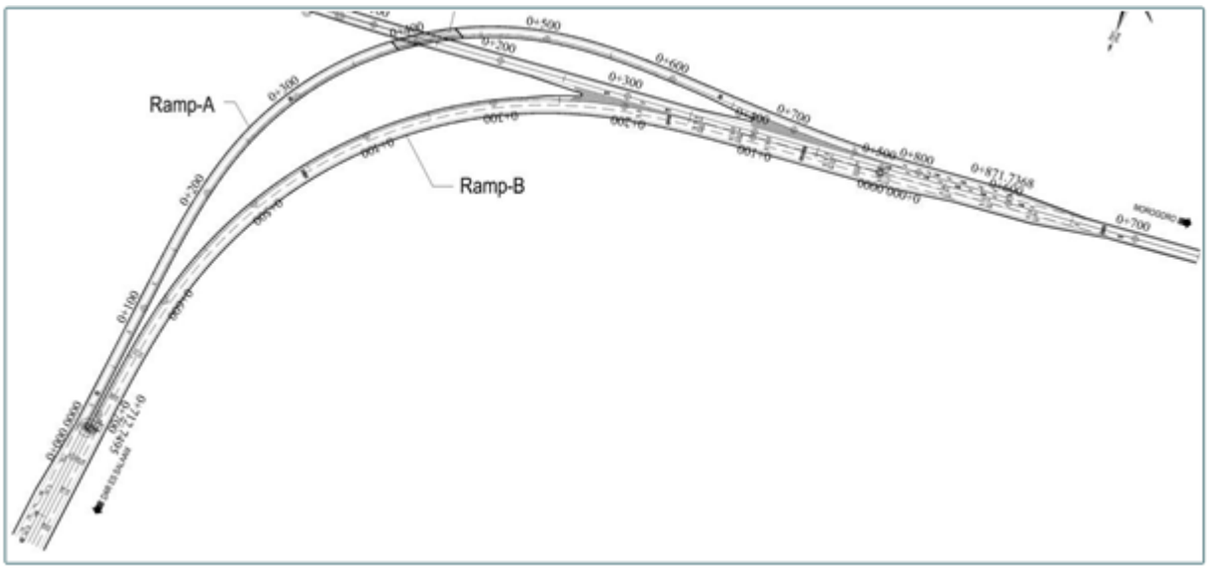


Figure 3.6: Chalinze Interchange No.2



3.4 Design Philosophy

The design for the Kibaha – Mlandizi – Chalinze - Morogoro expressway (205 km) project aims to decongest traffic along the existing Dar es Salaam – Morogoro road, which is currently under capacity, causing unnecessary delays and cost for the road users. The flexibility of road network is the most essential feature of any roads facility and should be able to always cater to the need of all users. Road users should have a feeling of utmost service in transportation sector. In the same vein, the Agency should have the utmost confidence with the capability of the infrastructure they provided to the public. The facility should provide a higher quality and timely services to the public and other stakeholder

The conceptual design will include Typical Cross sections, Structural Design and Pavement Design, Drainage Design and Traffic Sign, Ancillary Road works, Toll Plaza, and Rest Area as detailed in the table No. 3.1.

Table No. 3.1: Recommended Standards to be Adopted

Description	Design Criteria	Nationality	Apply
	Road Geometry Design Manual (MoWTC1), 2011)	Tanzania	Requirement
	Code of Practice for Geometric Design of Trunk	CSIR3) (South	reference

Description	Design Criteria	Nationality	Apply
Geometric	Korea Expressway Corporation Standard	Korea Korea	Requirement
	A Guide to Traffic signing by MOID 2009	Tanzania	Requirement
Pavement	Pavement and Materials Design Manual (MoWTC,	Tanzania	Requirement
	Road Design Manual Vol3 Pavement design Part II :	Uganda	Requirement
	AASHTO Standard for	USA	reference
Structure	British Standards BS 5400	U.K	Requirement
	BS EN Code for Structural Design : BS EN 1991, BS		Requirement
Hydrology /Hydraulics	(TRRL4) East African Flood Model	U.K	Requirement
Ancillary	The Guide to Traffic Signing (MOID5), 2009)	Tanzania	Requirement
Specification	Standard Specifications for Road Works (MoWTC, 2000)	Tanzania	Requirement
Surveying	Land Survey and Mapping Standards of Tanzania(Land Surveying Regulations	Tanzania	Requirement
Testing Procedure	Standard Central Materials Laboratory Testing Manual,	Tanzania	Requirement
Contract Management/ Operation	All FIDIC Book will be applicable	USA	Requirement

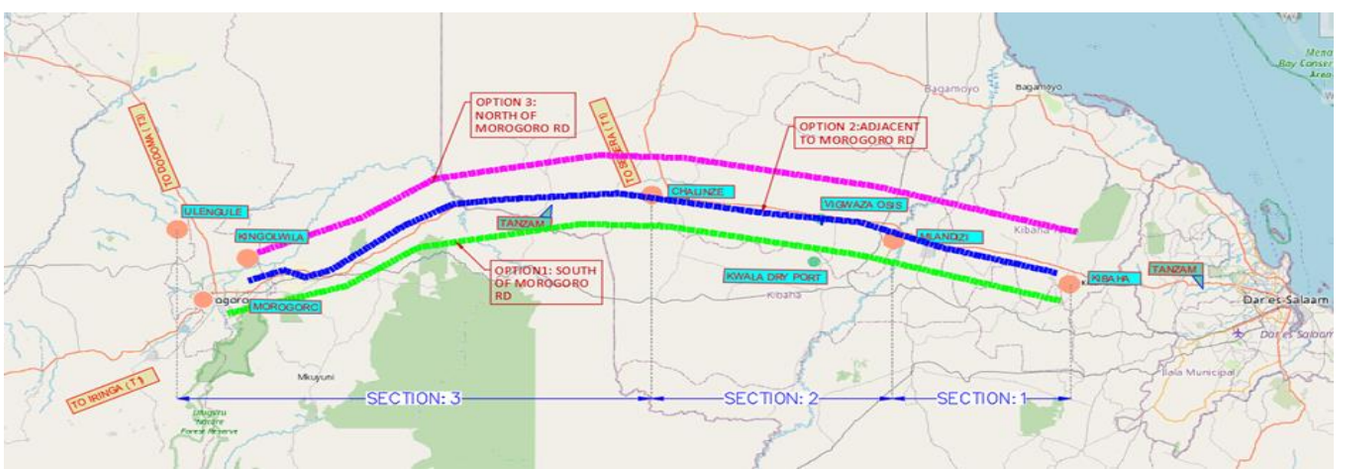
Based on the analysis of technical features, conceptual and design philosophy the Kibaha – Mlandizi – Chalinze - Morogoro Expressway is likely to be technically viable. The preliminary engineering design will be conducted during the feasibility study stage.

3.5 Route Corridor Analysis

Significance of the analysis is to adapt the construction corridor that is economical yet technically sound. Therefore, identification of route options relied on topographical maps and took into account ease of topography, maximize traffic connectivity with major road network, selection of shortest distance alignment, optimization of geometric standards within the topography, avoidance of geo-hazard areas that includes landslides, flooding and problematic soils, avoidance of environmentally protected areas and other sensitive habitats, avoidance of the location or areas of cultural heritage, religious sites and other locations of ethnic or community value.

In cognition of the factors above, three route corridor options were considered during undertaking the pre-feasibility study for Kibaha (TAMCO) - Morogoro (Sangasanga) Expressway. Option 1 is South of Existing Morogoro Road, Option 2 North of Existing Morogoro Road and Option 3 Along the existing Morogoro Road.

Figure 2.1: Three road options considered between Kibaha (TAMCO) to Morogoro (Sangasanga).



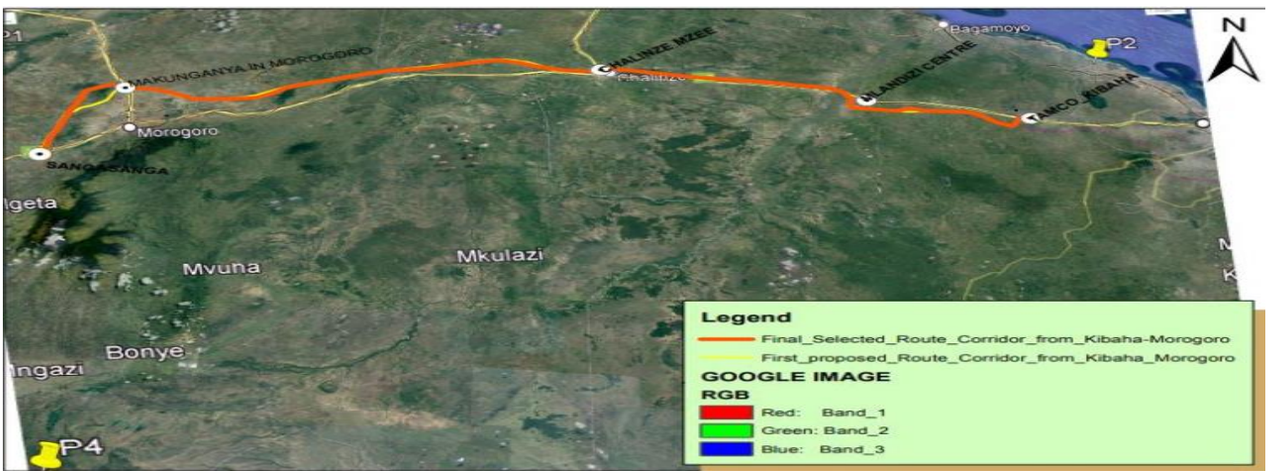
3.6.1 Analysis of the preferred route

Field data gathered from the verification of alternative routes for each alternative route was analysed logically to arrive at the best feasible option. Based on the multi-criteria approach, the most feasible route for delivering Option 1 is summarized below:

- Section 1: Kibaha (TAMCO) – Mlandizi: South of Morogoro Rd
- Section 2: Mlandizi – Chalinze: North of Morogoro Rd
- Section 3 Chalinze – Morogoro (Ulengule/Sangasanga T3): North of Morogoro

Therefore, the preferred route will start from Kibaha to Mlandizi on the south of existing road and turn to the north side of the existing road between Mlandizi and Chalinze and back on the south side at the section between Chalinze and Morogoro.

Figure 2.2: Recommended Route Corridor



CHAPTER 4: PRELIMINARY ECONOMIC ANALYSIS

4.1 Sector Background

The management of roads in our country started during the colonial era under the Germany rule although their system was not well defined. In early 1920s, the British colonial administration formed a department known as Public Works Department (PWD). PWD was responsible for water supply and sewerage, storm water management and drainage, roads and bridges as well as provision of electricity. After independence of Tanganyika in 1961, the functions of PWD were distributed into various Ministries. In this restructured system the function of roads management was placed under the Directorate of Roads in the Ministry of Works for Tanganyika.

In furtherance of roads improvement, the Government of Tanzania Mainland initiated and implemented two Road Sector Reforms. The first reform was done through Integrated Road Project – IRP I in 1990 while the second phase was referred as Integrated Road Project II - IRP II in the year 1995. These reforms had a view to transform the Directorate of Roads into an autonomous and commercially oriented agency. The main aim of these reforms was to deliver higher quality services to the public, with efficiency, effectiveness and the highest standard of courtesy and integrity.

At this juncture, the Roads Directorate under the Ministry of Works was hived off to form Tanzania National Roads Agency (TANROADS) established through an order known as the Executive Agencies (Tanzania National Roads Agency) Establishment Order, GN. 293 published on 1st July, 2000.

4.2 GDP Growth Rate at 2015 Prices (2014 – 2019)

Tanzania is among countries in Africa with the fastest growing economies. The Tanzanian Gross Domestic Product (GDP) averaging at 6.7% annually for the past decade. The World Bank declared Tanzania to be a lower-middle income economy country in July 2020, a target that was planned to be attained in 2025. The main economic drivers in 2019 were mainly tertiary activities (wholesale trade, retail trade information, transport, communication) with a percent share to GDP of 40.2% and Primary activities (agriculture and mining) which contributed 36.2%. The overall GDP growth in 2019 was 7.0%. Figure 4.1(a) below indicates GDP growth rates at 2015 Prices.

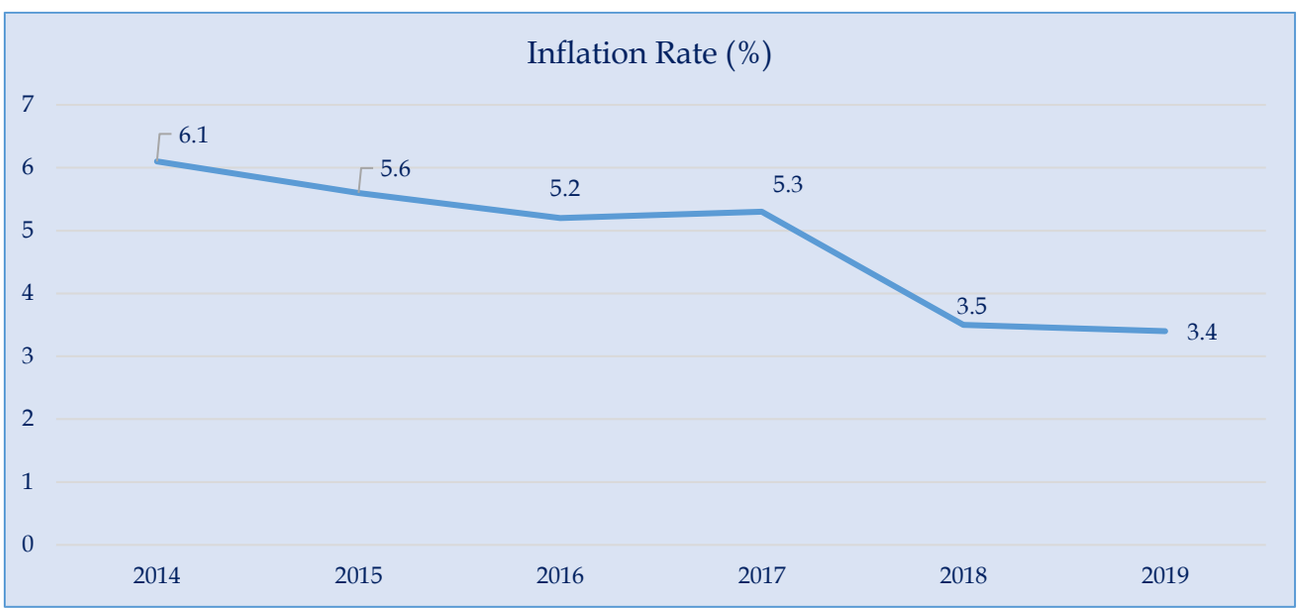
Figure 4.1(a) GDP Growth Rate at 2015 Prices (2014 – 2019)

Source: Tanzania in Figures Report by NBS, 2019

4.3 Inflation Rate

Inflation rate has continued to decline, reaching 3.1% by September, 2020. The trend in inflation for the past six years indicates a decrease as shown in Figure 4.1(b) below.

Figure 4.1(b) Inflation rate in Tanzania



Source: Tanzania in Figures Report by NBS, 2019

In relation to the investment climate, Tanzania has a favourable investment environment. According to UNCTAD Tanzania has an open investment environment with adequate standards of investor treatment and protection. The Government launched the New Investment Policy of Tanzania in 1996, which shortly resulted in the Tanzania Investment Act 1997. The Tanzania Investment Centre is an outcome of this Act. With the TIC, there have been coordinated efforts to increase Foreign Direct Investment (FDI) in Tanzania over the years as well as continued dialogue to improve the country's business environment.

4.4 Currency Depreciation

The shilling was fairly stable against the US dollar throughout 2019/20, supported by low and stable inflation, moderate current account deficit, prudent monetary and fiscal policies, and measures taken to ensure orderly functioning of the foreign exchange market. According to BOT Annual Report 2019/20, on average, the shilling traded at TZS 2,305.10 per US dollar, compared with TZS 2,293.08 per US dollar in 2018/19; equivalent to a depreciation of 0.4 percent, compared with a depreciation of 1.8 percent in 2018/19.

4.5 Development of Transport Sector

The transport system in Tanzania consists of five modes comprising roads, rail, water, air and pipelines. The transport system has its roots in the colonial period over a century ago when the sea ports provided the international gateways and railways were built into the interior to provide access for both trade and administrative purposes. Inland ports were also constructed on the great lakes to facilitate trade with neighbouring countries.

The Roads have only gained importance in the past 50 years as road transport became more affordable and an important feature of a market economy. A high proportion of the road infrastructure was not modernised over time due to limited resources to invest and a large amount of infrastructure is now beyond its economic life. Lack of timely maintenance resulted in rapid deterioration of the roads infrastructure and this imposed high costs on the economy a trend that continues to date. The existing roads infrastructure does not serve the modern days needs of the economy which requires transport infrastructure to be upgraded and improved over large areas of the country. During the past two decade, significant progress has been made, particularly in the roads subsector, but considerable investment is still required to deliver improved transport services to meet the growing needs of the economy and the region which it serves.

Tanzania is the international gateway for several land linked neighbouring countries. Burundi, Rwanda, Uganda, DR Congo, Zambia and Malawi are dependent to some extent on the country’s transport network for their access to global markets. For Tanzania, facilitating this access is not only good neighbourliness but is also good business as the provision of transport services is also a potential source of revenues and a catalyst for accelerating development. The Tanzania National Development Strategy emphasises that extensive and efficient infrastructure is critical to ensure the effective functioning of the country’s economy. As a result, a sizeable share of new commitments is being directed to infrastructure investments with a focus on reducing travel times between regions, integrating the national market and connecting it to other markets in the East and Central African

Communities. These initiatives will create a positive impact on national competitiveness, growth and regional integration.

4.6 Road Network in Tanzania

As of December 2021, the coverage of the national road network was 36,361.95 km out of which 11,186.16 km is paved. The network comprises of 12,215.58 km Trunk Roads of which 9,058.22 km is paved and 3,157.36km is unpaved and 24,146.37 km Regional Roads of which 2,127.94 km is paved and 22,018.43 km is unpaved.

The establishment of TANROADS in 2000 enhanced implementation of special projects initiated by the Ministry of Works aiming at joining all regional headquarters with paved roads. The implementation of that special projects culminated into construction of a total of 223 km along Mtwara corridor to join Dar es Salaam, Lindi and Mtwara regions and 455 km along the Central corridor to join Dodoma, Singida, Tabora, Shinyanga, Mwanza, Geita and Kagera regions.

The funds for the special projects were sourced from Government budget. To-date, almost all regional headquarters have been connected by paved roads using the Government budget, Donor funds and credits lines from International Financial Institutions. However, there are pending projects to connect the remaining Regions Headquarters due to budget constraints.

Other policies, programmes and strategies implemented by TANROADS include but not limited to Five Years Development plan, National Transport Policy, Government Development Vision 2025 and Special Development Programme. This resulted into increase of paved national road network from 1,300 km in 1961 to 11,186.16 km in 2021.

Given the budget constraints and unreliable donor funds, the ministry of works through TANROADS had opted for an alternative financing for the road projects which consider innovative financing mechanisms which offer broader alternatives to the traditional financing. Therefore, TANROADS has identified Kibaha - Chalinze - Morogoro Expressway (205km) to be implemented under PPP arrangement so that it can benefit from innovation and financing from private sector. Under that arrangement the project will be financed by the private party and in return the private party will recoup its capital investment and projected profit by user toll fees. The project is among the key Strategic Projects planned to address congestion in Dar es Salaam City in the TANROADS 6th Strategic Plan 2021/22 – 2025/26 and in the Five National Five Year Development Plan 2021/22 – 2025/26.

4.7 Sector Analysis

The sector can be analysed using SWOC analysis, where strength available can be explored, weakness can be addressed while opportunities available can be explored and challenges mitigated. Table 4.1 provides SWOC analysis for implementation of the Kibaha - Mlandizi –Chalinze-Morogoro Expressway (205 Km).

Table 4.1: SWOC Analysis

STRENGTH	WEAKNESS
• National Construction Policy 2003 and National Transport Policy 2003 allows involvements private sector. • Existence of Road Act 2007 and Road and Fuel Tolls Act (Cap 220 RE 2002). • Political will to improve road network through PPP arrangements • Government support on improvement of road network in terms of provision of land for investment, funds for projects preparation and PPP contract management. • Peace and Security stability • Availability of labour force. • Conducive investment environment (policy, legal and economic stability). • Geographical location - Kibaha – Chalinze - Morogoro Express Way form a gateway to the Central Northern and Southern Road corridors of Tanzania which provides access to neighbouring countries of Kenya, Uganda, Rwanda, Burundi, DRC-Congo, Zambia and Malawi. • Availability of supporting infrastructures - electricity, water, rail ways, access roads for transporting of identified construction material and ICT. • Availability of Construction material-quarries, borrow pits sands, water and timber.	• Budget constraint • Inadequate technology • Inadequate innovation • Inadequate managerial skills in operation and maintenance of toll roads projects

OPPORTUNITY	CHALLENGES
• Stable and progressive economic growth (6-7% annual growth). • Significant population growth (Annual growth rate 3.1%) • Increasing number of traffic • Innovation and existence of automatic electronic tolling system for road users and electronic monitoring for performance of the road infrastructure • Increase of middle income population with good purchasing power • Increase of economic activities.	• High investment cost • Presence of competitive transportation projects • Undeveloped domestic financial market and private sector. • Unstable land use plans.

Despite the several improvement of road network within the Central, Northern and Southern Road corridors of Tanzania, congestion has been increasing yearly, especially in Kibaha to Morogoro highway section. Successful implementation of this project will reduce the congestion and improve traffic flow between Dar es Salaam and Morogoro.

4.8 Project Demand

TANROADS data indicates that, in the last ten (10) years, traffic volume has increased by about 50 % from 13,001 AADT in 2011 to 22,780 AADT in 2020 in Kibaha TAMCO – Chalinze road section and from 4,376 AADT in 2016 to 7,699 AADT in 2018 in Chalinze – Morogoro road section. The annual average traffic growth rate is approximated at 3.30% corresponding to the volume of 54,264 veh/day. This approximation is based on the PPP feasibility study report for the Dar – Chalinze expressway (2016). The increase in traffic volume is attributed to population growth, GDP growth, and transit traffic from the neighboring countries using the Tanzania Ports Authority (TPA). Expansion of Port services along the Indian Ocean is another reason for increasing traffic volumes. **Table 4.2** illustrates the trend of traffic volumes for past 10 years.

Table 4.2 Trend for traffic volume along the Central Corridor

Road Section & Count Location	Date of Traffic Count	Cars	Pickups&Vans	Light Lorries	Medium Lorries	Heavy Lorries	Very Heavy Lorries	Small Buses	Large Buses	Three Wheelers	Motocycles	Others	MT_AADT
KILUVYA (Jct to Kawawa-Dar) - KIBAHA MAILIMOJA	22-11-11	2693	975	1147	928	1085	343	906	1582	0	0	0	9659
KILUVYA (Jct to Kawawa-Dar) - KIBAHA MAILIMOJA	11-10-12	2131	1921	345	2083	1697	395	1593	697	0	0	0	10862
KILUVYA (Jct to Kawawa-Dar) - KIBAHA MAILIMOJA	29-10-19	3367	2140	202	1404.741	191	1762.907	1981	771	216	4069	27	16132
KIBAHA MAILI MOJA - TAMCO JCT TO TUMBI HOSPITAL	16-11-11	3192	3151	1886	1144	895	221	980	1532	0	0	0	13001
KIBAHA MAILI MOJA - TAMCO JCT TO TUMBI HOSPITAL	13-11-13	3586	1361	486	1720	1706	236	399	2101	0	0	0	11595
KIBAHA MAILI MOJA - TAMCO	03-11-16	2779	2141	399	1427.282	371	1446.888	1775	791	118	2414	4	13666

Road Section & Count Location	Date of Traffic Count	Cars	Pickups&Vans	Light Lorries	Medium Lorries	Heavy Lorries	Very Heavy Lorries	Small Buses	Large Buses	Three Wheelers	Motocycles	Others	MT_AADT
JCT TO TUMBI HOSPITAL													
KIBAHA MAILI MOJA - TAMCO JCT TO TUMBI HOSPITAL	26-10-20	5502	2674	501	1523.807	336	2071.09	1367	802	1070	6931	2	22780
TAMCO JCT TO TUMBI HOSPITAL - KIBAHA PICHA YA NDEGE	24-10-12	1855	2011	143	2289	1185	173	1459	622	0	0	0	9737
TAMCO JCT TO TUMBI HOSPITAL - KIBAHA PICHA YA NDEGE	13-10-17	2401	1850	346	1233.467	321	1250.41	1534	683	102	2086	3	11809
TAMCO JCT TO TUMBI HOSPITAL - KIBAHA PICHA YA NDEGE	08-10-21	3362	1707	267	994.0023	256	2070.462	1436	537	355	4030	0	15014
KIBAHA PICHA YA NDEGE - MLANDIZI	11-06-12	1064	935	612	1070	1067	669	1113	440	0	0	0	6970
KIBAHA PICHA YA	25-10-18	969	1099	125	258.3232	44	1791.596	843	614	7	1475	0	7226

Road Section & Count Location	Date of Traffic Count	Cars	Pickups&Vans	Light Lorries	Medium Lorries	Heavy Lorries	Very Heavy Lorries	Small Buses	Large Buses	Three Wheelers	Motocycles	Others	MT_AADT
NDEGE - MLANDIZI													
MLANDIZI - CHALINZE	13-10-17	857	747	114	179.5981	86	1511.335	387	664	127	2635	1	7309
MLANDIZI - CHALINZE	07-10-21	1111	995	61	295.2265	246	2238.008	367	560	117	3651	0	9641
CHALINZE - UBENA (JCT TO LUGOBA)	03-11-16	674	665	66	155.0297	87	1424.11	195	506	16	588	0	4376
CHALINZE - UBENA (JCT TO LUGOBA)	25-10-18	1851	1126	206	234.6255	206	2367.585	376	844	12	475	0	7699
UBENA (JCT TO LUGOBA) - MIKESE	18-10-12	435	497	140	194	888	201	148	385	0	0	0	2888
UBENA (JCT TO LUGOBA) - MIKESE	30-01-15	543	781	46	144	101	1196	209	489	0	0	0	3509
UBENA (JCT TO LUGOBA) - MIKESE	01-12-16	593	765	165	204.7009	570	949.9192	294	573	44	682	52	4893
UBENA (JCT TO LUGOBA) - MIKESE	15-11-20	815	914	59	128.499	156	2269.769	230	499	9	1142	10	6232
MIKESE - BIGWA JCT	19-10-12	776	728	209	227	945	173	346	595	0	0	0	3999

Road Section & Count Location	Date of Traffic Count	Cars	Pickups&Vans	Light Lorries	Medium Lorries	Heavy Lorries	Very Heavy Lorries	Small Buses	Large Buses	Three Wheelers	Motocycles	Others	MT_AADT
MIKESE - BIGWA JCT	21-10-13	1167	980	60	400	1118	349	864	764	0	0	0	5702
MIKESE - BIGWA JCT	10-10-18	1045	1113	90	208.1198	117	1839.836	564	672	25	1364	10	7048
BIGWA JCT - MOROGORO	24-11-11	682	620	90	330	420	673	552	658	0	0	0	4025
BIGWA JCT - MOROGORO	18-10-19	1468	1152	168	266.0326	253	1762.789	1264	495	465	2487	34	9815
MOROGORO - SANGASANGA	20-10-12	884	573	641	193	515	82	445	267	0	0	0	3600
MOROGORO - SANGASANGA	19-10-19	448	491	133	301.072	151	787.9118	132	158	630	825	10	4067

Source : TANROADS RMMS

From above table, the trends for past 10 years for traffic volume necessitate expansion of road network along central corridor by providing tolled expressway services to the population along that corridor and neighbouring regions and countries.

4.9 Economic Benefits

The construction and implementation of the Kibaha – Mlandizi - Chalinze – Morogoro Expressway will have a positive impact to social-economic welfare. The Expressway is expected to provide high quality and sustainable service level that is affordable to road users. The road users will include but not limited to owners of cars, pick- ups and vans, Light, medium, heavy and very heavy trucks, small and large buses.

The economic benefit will be in terms of time saving, saving from generated traffic, salvage value, saving on vehicle operation and maintenance cost and reduction of accidents. Other benefits include: -

i. Employment to different professions and casual labourers who will be direct and indirect involved in the project life cycle.
ii. Improvement of socio-economic activities within the territory of the project and its neighborhoods.
iii. Improved Human resource capacity and management system for transport sector staff.
iv. Improvement of business community. All stakeholders who will be involved such as project contractors, suppliers, service providers, vendors etc.
v. Promote tourism along the corridor.
vi. Saving on public funds used for maintenance costs during the concession period.
vii. Creation of tax base whereby taxes and statutory payments related to this the project will be collected by the Government.
viii. Expansion of the road network along the Central corridor.
ix. Investors who will partner with Government for this project under PPP arrangement will benefit through return on investment.

x. Creation of business opportunities to the community

Quantitative economic benefits will be determined during the feasibility study.

4.10 Economic Costs

4.10.1 Project costs

The proposed expressway Kibaha – Mlandizi – Chalinze – Morogoro project requires substantial amount of financial resources for construction, operation and maintenance. The total project cost is estimated at **TZS 1,972,484,652, 638.87** that includes Engineering Design, Procurement and Construction, Maintenance and Operation costs. Of which the estimated costs for Engineering Design, Procurement and Construction is **TZS 1,411,916,501,097.40** and estimated operation, maintenance costs are **TZS 560,568,151,541.70** which is equivalent to 42 % of the total construction costs according to the 2016 Dar es Salam – Chalinze expressway PPP Feasibility Study. The estimated costs exclude costs for land acquisition, relocation of utilities and Environmental management plan which is estimated at **TZS 36,164,759, 923.94**. The financial analysis chapter provides the detailed assumptions and costs of the project.

4.10.2 Capital Investment

It was estimated that total capital investment (CAPEX) is **TZS 1,411,916,501,097.40,** which includes costs for Engineering Design, Procurement and Construction.

4.10.3 Operation and Maintenance Costs

During the operation period of the project, there will be operation and maintenance costs covering recurrent and periodic maintenance costs for a minimum period of 25 years estimated to be TZS **560,568,151,541.70** which is equivalent to 42 % of the total construction costs. The estimate is according to the 2016 Dar es Salam – Chalinze Expressway PPP Feasibility Study. Other maintenance and operation costs will be estimated during feasibility study.

4.11 Concluding Remarks

Based on the expected projects economic costs and benefits to Tanzanians, the Kibaha – Mlandizi – Chalinze – Morogoro Toll Expressway is likely to be economically viable and hence worthy undertaking. Adjustments made to derive economic costs include, Construction Cost escalation: 2% pa, Exchange rate 2,280/US$, VAT: 18% and Corporate Tax: 30% and discount Rate: (9% Nominal, 5% Real).

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CHAPTER 5: PRELIMINARY COMMERCIAL ANALYSIS

5.1 Project Structure:

The proposed project structure will follow a project finance approach. The proposed project structure will follow a project finance approach whereby the private party will incorporate a company in Tanzania (SPV) with the sole responsibility of design, build, finance, operate and maintain the proposed projects for the period of the concession. TANROADS will be responsible for signing PPP Agreement with the Project Company (SPV). In addition, TANROADS will be responsible for Monitoring and Evaluation of the project during Contract management period and operation after asset hand over. Once the project construction is completed, the project company may engage an operator to collect user fees on its behalf under an operating agreement. The preliminary financial model provides for an assumption that the expressway will be operated indirectly by the Project Company to relieve the project from additional cash flows burden and local experience has indicated that most of the existing roads projects of similar nature are being run directly by experts employed by the Public Party. The anticipated structure and obligations of the Project Company is as detailed in Figure 5.1

Figure 5.1 Structure and obligations of the Project Company

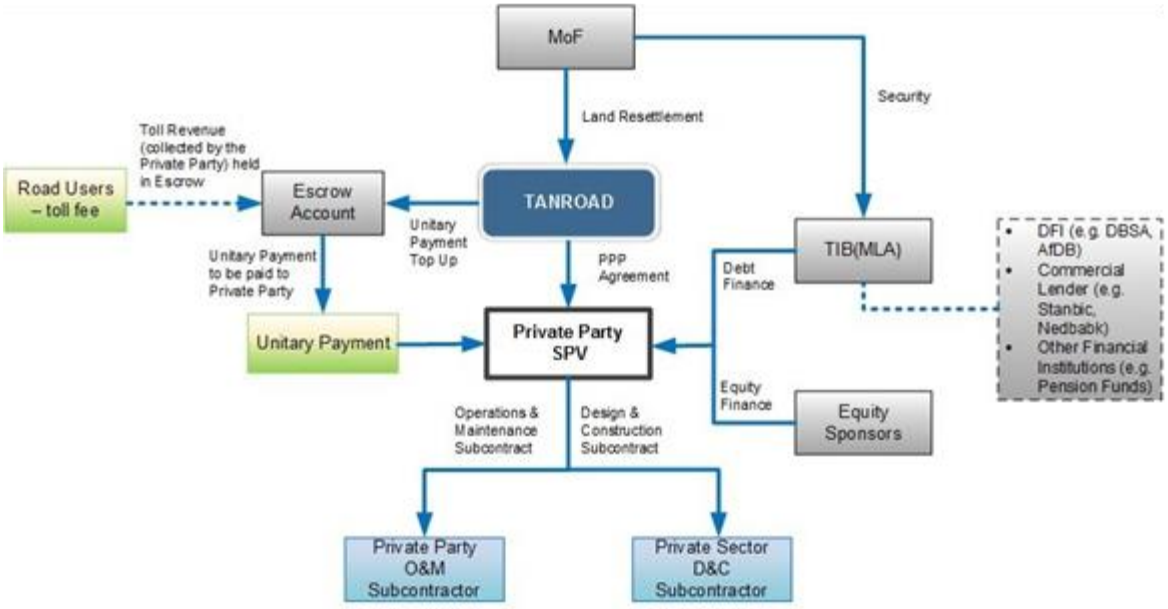


Figure 5.1 Financial/Legal Structure and the Proposed Payment Mechanism

5.2 Financing Structure

Total project cost is estimated at **TZS 1,972,484,652, 638.87** that includes Engineering Design, Procurement and Construction, Maintenance and Operation costs. Of which the costs for Kibaha – Mlandizi - Chalinze section (85 km) is **TZS 674,700,631,332.21** and for Chalinze - Morogoro is **TZS 1,297,784,021,306.66**. This project will be financed by the private party through SPV in a combination of debt to equity of up to 80:20 ratios. In return the private party will recoup its capital investment by user toll fees.

5.3 Proposed PPP Model

There are many options for PPP models. The proposed model for this project will follow the objectives of improved road service level which is expected to increase revenue for TANROADS. The Contracting Agency prefers a model where the private

investor will Design, Build, Finance, Operate, Maintain and Transfer (DBFOMT). In this arrangement the Project Company is expected to:

i. **Design** the Kibaha – Mlandizi – Chalinze - Morogoro**:** The design is expected to meet global standards as per contract.

ii. **Finance**: The project is expected to be fully financed by the Project Company.

iii. **Construct:** Construction of the Kibaha – Mlandizi – Chalinze – Morogoro expressway as per contract.

iv. **Operate and Maintain:** Management of the operations of the Kibaha – Mlandizi – Chalinze and Chalinze - Morogoro for the duration of the concession. The standards of the expressways are expected to retain high quality throughout the concession period. Contracts should capture rehabilitation of facilities and replacement of systems to ensure targeted service levels. Options including reserve funds for machine/equipment replacement or sinking funds can be used as a mechanism to ensure availability of funds for major maintenance and replacement. The reserve for replacement should be kept on designated account.

v. **Transfer:** At the end of the concession period the asset is to be transferred to TANROADS in good condition to ensure continuity of service delivery to the public.

In choosing this PPP model, TANROADS obligation will be to provide the land for developing the expressway and other associated facilities. TANROADS will also frequently monitor and evaluate the various stages of project construction and maintenance as per agreement. At the end of the concession period, the investor shall handover the facility to the CA or the parties upon mutual agreement may opt to renew the operation and maintenance agreement.

The DBFOMT model for PPP is considered as the best feasible option to be used due to the fact that there is limitation of funds from the Government source. Consequently, depending on finance from the Government project implementation may delay or not be realized. In additional limited technological capacity and managerial skills during the operation and maintenance for a project such nature are other reasons for opting DBFOMT PPP model.

In implementing the Kibaha Mlandizi – Chalinze – Morogoro expressway, the opted model will entail that TANROADS will enter into an agreement with a private party under which it allocates to the said party all of the project's duties during the concession period.

The benefits of opting the model of DBFOMT are;-

i. The proposed model entails that most of the risks will be allocated to the private sector.
ii. Enables TANROADS to develop the proposed expressway without need of having financial, technical or operational capacity.
iii. DBFOMT is a preferred option as it will maximize innovation in the sector and thus bring in the country modern toll expressway.
iv. Transfer of knowledge and capacity building.

5.4 Risk Identification, Allocation and Mitigation

Preliminary Risk Identification and allocation analysis was done following the selected PPP model and it was observed that most of the significant risks are likely to be allocated to the private party. A workshop for risk identification, quantification of the identified risks, estimation of the probabilities and preparation of the risk matrix will be carried out during the feasibility study stage. The risk Matrix is appended as Annexure L

5.5 Output Specification

The expected outputs of the project will include a modern 4 lanes carriageway toll expressway with a driving speed of 100km/hr, modern rest areas at intermediate locations along the route, road service level that meets international standards, interchanges and e-tolling system at entry and exist points. It will also reduce travel time and vehicle operation costs by half (50%) which in turn, will ensures that agricultural goods and industrial produce will reach their destined markets on time and at reasonable costs. This will guarantee availability of goods and produce on markets at reliable and predictable prices.

The project will also improve quality of environment near the congested roads which in turn will reduces health risks by reducing mortality and improvement of social economic activities for the general public at large. This is in line with TANROADS Sector Strategic Plan and the National Environmental Policy which emphasizes that the transport sector shall focus on improvement in mass transport system to reduce fuel consumption, traffic congestion and pollution.

The key performance indicators for operation are as follows:

Performance Standard	**Acceptance Criteria**	**Audit**	**Period to Rectify**
Operations management system			
An operations management system that omplies with the required criteria that will assist the Concessionaire in the operational activities. Operations management systems must use data generated by operations and Call Centre activities and have the ability to link with the financial management and reporting software to be used by the Concessionaire.	Operations Management System that complies with the relevant specifications and reporting requirements.	**Monthly**	**1 month from identification**
Functioning of the control room			
The Control Room shall function continuously in a manner that complies with the required criteria set down in the Concessionaire's policies and procedures for the functioning of Control Room.	No failures in case of emergency or critical actions, and no more than two functional failures of the Control Room, in other less critical actions, to comply with policies and procedures in each month.	Monthly	1 day from identification

Performance Standard	Acceptance Criteria	Audit	Period to Rectify
Marketing plan			
The Marketing Plan shall function in a manner that complies with the required criteria set down in the Concessionaire's policies and procedures for the marketing function.	No more than two failures of the Marketing Plan to address key issues and develop target markets in each month	Quarterly	10 days
Route Patrol and Emergency Response			
The Route Patrol and Emergency Response shall function continuously in a manner that complies with the required criteria set down in the Concessionaire's policies and procedures for the functioning of Control Room, Route Patrol and Emergency Response.	No failures in case of emergency or critical actions, and no more than two functional failures of the Control Room, in other less critical actions, to comply with policies and procedures in each month.	Monthly	1 day from identification
Route Patrol and Emergency Response			
The Traffic Monitoring System shall function continuously on the Project Road in a manner that complies with the required criteria set down in the Concessionaire's policies and procedures for the functioning of Traffic Monitoring.	No more than two functional failures of the Traffic Monitoring System to comply with policies and procedures in each month.	Monthly	Two days

5.5.1 The key performance indicators for maintenance are as follows:

Performance Standard	Acceptance Criteria	Audit	Period to Rectify
Facilities inspection			
Compliance with the above inspection standards.	Less than 3 structures without inspection reports	Annually	1 month from identification
Bridge inspection			
Compliance with the above Performance Standards.	Less than 3 bridges without inspection reports	Annually	1 month from identification
Structures & Steel Structure repair			
Repair Structure neatly to the original dimensions, design strength and appearance. Repair to be Approved by suitably qualified engineer.	Less than 3 Structures may be damaged	Annually	1 month from identification
Bridge deck and girders			

Performance Standard	Acceptance Criteria	Audit	Period to Rectify
Bridge deck and girders must be kept operational at all times to ensure that the deck and girders are operational and in good condition at all times.	Less than 2 instances that do not comply with the required	Annually	1 month from identification
Bridge drainage cleaning			
Drainage holes/channels and/or conduits must be kept open at all times to insure proper surface drainage from the bridge or other Project Road structures.	Less than 2 drainage holes/channels or conduits may be blocked. Bridges over 100m in length – High	Annually	1 month from identification
Bridge bearings & load plates			
No debris present that can damage the bearings or load plates or prevent movement	No bearings or load plates may require maintenance	Annually	1 month from identification
Bridge deck expansion joints			
No debris present that can damage the joints or prevent joint movement	Less than 2 joints may have debris at any position in the joint	Annually	1 month from identification
Retaining wall			
Repair retaining wall neatly to the original dimensions, design strength and appearance. Repair to be approved by suitably qualified engineer.	Less than 3 retaining walls may be damaged	Annually	1 month from identification
Potholes (pavement)			
The Project Road shall be 100% free of potholes.	A Section shall be deemed compliant with the Performance Standard if there are less than 2 potholes per lane with a diameter of greater than 100mm	Annually	1 week from identification for temporary repairs 3 months from identification for permanent repairs
Edge breaks (pavement)			
The Project Road shall be 100% free of edge breaks	A Section shall be deemed compliant with the Performance Standard if there are less than 5 meters of edge break with a surfacing loss greater than 100mm from the original surfacing width measured from the centre line of the road	Annually	1 month from identification
Localized cracks (pavement)			
The Project Road shall be 100% free of cracks wider than 3mm. Sealed cracks must be watertight, neat and	No more than a cumulative length of 20m of unsealed cracks per 1km of road Section. 90% of all	Annually	1 week from identification

Performance Standard	Acceptance Criteria	Audit	Period to Rectify
the sealant shall not project above the road surface by more than 3 mm	sealed cracks must comply with the Performance Standard		
Roadside grass cutting, Trees and shrubs cutting			
Shoulders: The width of the strip must be the shoulder plus 3 m of the side slope. Maximum height of grass after cut < 150 mm **Side Drains:** The side drain and the area between the side drain and the side slope must be cut. The height of grass must not be less than 50 mm and not more than 150mm Signboards & sight triangles at intersections: These grass must at all times be kept at a maximum height of 150mm Medians, interchanges & road reserve: All areas within the road reserve must be cut. The height of grass must not be less than 50mm and not more than 150mm Trees and Shrubs: 100% of all trees and shrubs obstructing side drains and posing a safety risk with respect to visibility of road signs and intersections must be eradicated	Shoulders: less than 50m^2 of area not cut to specification Side Drains: Height of grass not more than 200mm measured quarterly Signboards & sight triangles at intersections: Height of grass not more than 150 mm measured at any time Medians, interchanges & road reserve: Height of grass not more than 200mm measured quarterly Trees and Shrubs: less than2 trees or shrubs not complying with the specification	**Monthly**	Shoulders: 1 Week after expiry of scheduled activity Side Drains: 1 Week after expiry of scheduled activity Signboards & sight triangles at intersections: 1 month Medians, interchanges & road reserve: 1 Week after expiry of scheduled activity Trees and Shrubs: 1 Week after expiry of scheduled activity
Concrete drains and channels			
All concrete drains and channels must be maintained and kept clean. A silt depth of no more than 50mm will be allowed in the drain invert at any time	A Section shall be deemed compliant with the Performance Standard if there is no more than 50m of channel or drain at any single location not complying with the Performance Standard	Quarterly	2 weeks from identification during the rainy season 1 month from identification during the dry season
Culverts			
Culverts must be kept open at all times to insure proper drainage of runoff.	No culverts may be blocked	Quarterly	1 month from identification

Note 1: Hand – back evaluation indicators will be established during feasibility study.

5.6 Remedies to poor performance:

In order to improve the performance to the expressway Project, TANROADS technical team will conduct routine training, mentorship**,** site meetings**,** motivation and staff performance Appraisal**.**

5.7 Project Revenue

The expected revenue stream from the completed expressways Kibaha – Mlandizi – Chalinze and Chalinze - Morogoro projects is as per financial model parameters which are detailed in Chapter 6 of this report. The revenue will be from user fees and other fees from operation of the project during the concession period. The Project Company's anticipated revenue streams will include at a minimum:-

i. Toll fees from users.
ii. Rental charges from rest areas and other facilities,
iii. Advertisements fees and
iv. Abnormal loads permit fees and ooverloading penalties.

5.8 Payment Mechanism

In this project the payment mechanism generally refers to the source of money over the long-term to pay the PPP private investor for the investments, operating costs, and maintenance costs of the project as well as TANROADS remuneration over the concession given to private party. Payments will typically be sourced from user charges (tolls fees, rental charges from rest areas and other facilities, advertisements fees and overloading penalties).

User fees data will be charged per 1 km travelled and are estimated to be TZS 80 for automobiles, TZS 200 for small bus, TZS 400 large bus, TZS 200 for light vehicles, TZS 280 for medium goods vehicles, TZS 360 for heavy goods vehicles and TZS 480 for articulated trucks.

According to the Survey for Willingness to pay carried out during the previous Dar es Salaam – Chalinze Expressway PPP Feasibility Study (2016) with the assumption that the project will commence its operations by year 2022 came up with the following toll rates: -

Table 5.19: Proposed toll fess

Kibaha – Mlandizi – Chalinze - Morogoro	Proposed Toll Fee/km
Automobile	80
Bus - Small	200
Bus - Large	400
Goods Vehicle - Light	200
Goods Vehicle - Medium	280
Goods Vehicle - Heavy	360
Articulated Trucks	480

The rates will be reviewed during the feasibility study of the proposed project. The fees from adverts will be determined based on Regulation 8 of the Road Use Regulations,2010 G.N 189/2010). Currently the fees charged are as indicated in Table 4 of Road Use Regulations.

5.9 Asset Handover

The private party will be responsible for designing, building and financing, operating and maintaining the asset during concession period of 25 years, thereafter the private investor will revert the facility to the CA.

There must be provisions relating to handing-over the asset back to the TANROADS which should feature in the agreement provisions for knowledge transfer, clear description of the asset to be handed over including its scope and estimated value, maintenance requirements on hand-back and the right of TANROADS to inspect the assets sometime before hand over and to remedy any defects at the private party's expense. TANROADS shall prepare exit strategy based on the provisions contained in the agreement in relation to termination and expiry of the project.

5.10 Market Appetite:

Present results of market appetite, setting out the market appetite expectations regarding the commercial profile of potential bidders (without identifying individual businesses) and financiers and their readiness to undertake the project. The previous study for Dar es Salaam- Chalinze Expressway (2016) made by TANROADS based on three options to determine commercial profile to potential bidders and financiers and their redness to undertake the project revealed the following: -

Option No. 1 (Traffic Revenue Risk will be borne by the Private Party)

The general consensus amongst the Toll Road Developers/ Operators/ Construction Contractors and financiers was that the Private Party would not be in a position to carry all the traffic revenue risk given the uncertainty and risks associated with forecasting toll revenue for the first toll road project in the country and given the limitations of the input data. The financiers confirmed that they would not have appetite for funding if they were exposed to traffic revenue risk. Based on the interaction with the market this payment mechanism option would not be acceptable to the market and it is therefore not recommended for the Project.

Option No. 2 (Revenue Risk Sharing between the Public and Private Parties)

The Toll Road Developers/ Operators/ Construction Contractors and financiers felt that a risk sharing approach to traffic revenue would be acceptable subject to the balance of risk between the parties. There was a general cautiousness in approaching the question of shared traffic risk from both lenders and developers with some of developers having more appetite for traffic revenue risk. The lenders did not have appetite for any traffic revenue risk and would look to a risk sharing mechanism that kept the lenders whole. The stated reason for the cautious approach to sharing traffic revenue risk is the uncertainty and risks associated with forecasting toll revenue for the first toll road project in Tanzania and the limitations of the input data. None of the parties rejected the shared traffic revenue risk option outright and as such it appears that the market has appetite for the shared risk option provided that at the very least the lenders are kept whole.

Option No. 3 (Traffic Revenue Risk Retained by the Public Party)

The availability/ annuity payment mechanism option was generally preferred by financiers and by Toll Road Developers/ Operators/ Construction Contractors with the later showing more appetite for taking traffic revenue risk on a cautious limited basis. The financiers do not have appetite for traffic revenue risk. The road development projects currently being contemplated in east Africa (including the Kenya road annuity scheme and the Kampala – Jinja Expressway PPP) favour the availability/ annuity payment mechanism. Respondents generally felt that the availability/ annuity payment mechanism option was the appropriate mechanism for Tanzania to adopt in implementing its first toll road. The precedent created by the first toll road will provide data about road user preference in the tolling context that will enable the private sector to take an informed view on traffic revenue risks on toll roads in Tanzania which will enable Tanzania to pass more traffic risk on the private sector in successive projects.

5.11 Conclusion on Commercial Analysis

Based on the above analysis, the Kibaha – Chalinze – Morogoro (205km) Expressway project is likely to be commercially viable. Further analysis on traffic volume study, hand – back evaluation indicators, rental fees from rest areas will be established during feasibility study.

CHAPTER 6: PRELIMINARY FINANCIAL ANALYSIS

6.1 Financial Assessment

This chapter analyses the financial viability of the proposed project. It determines project costs, projected revenue, sensitivity analysis, affordability and value for money in considering basic financial and economic assumptions.

This project will be implemented under Design, Build, Finance, Operate, Maintain Transfer arrangement (DBFOMT). It is proposed that the Government through the contracting authority will provide funds for land acquisition to support the project by paying for compensation as an incentive to motivate the private party.

The financial assessment covers the design, construction, operations and maintenance of Kibaha – Mlandizi – Chalinze – Morogoro toll Expressway (205 km) with two (2) options based on construction methodology namely Flexible pavement and Rigid pavement.

Option 1: Rigid Pavement

i. Four (4) Lanes: Kibaha – Morogoro

ii. Six (6) Lanes: Kibaha – Morogoro

Option 2: Flexible Pavement

i. Four (4) Lanes: Kibaha – Morogoro

ii. Six (6) Lanes: Kibaha – Morogoro

Basic Financial and Economic Assumptions

The financial analysis for the project has been carried out in consideration of the following assumptions:

i. Key Dates Assumptions

- Design Commencement Date: 01st March 2024.
- Construction Commencement: 01st July 2024 (3 months after design commencement).

- Design Completion Date: 30th April 2025.
- Construction Completion Date: 30th June 2028.
- Operation Commencement date: 01st September 2028.
- Concession End Period: 30th June 2053.

ii. Concession Period 25 Years.

iii. Construction Cost escalation: 2% pa

iv. VAT: 18%.

v. Corporate Tax: 30%.

vi. NPV discount Rate: (9% Nominal, 5% Real).

vii. Exchange rate 2,280/US$.

viii. Traffic Fee (in TZS).

- Automobile: 80.
- Bus – small: 200.
- Bus – large: 400.
- Goods Vehicle – Light: 200.
- Goods Vehicle – Medium: 280.
- Goods Vehicle – Heavy: 360.
- Articulated Truck: 480.

ix. Gearing ratio (20/80), equity-debt.

x. Loan tenure: 10 years (including 3 years grace period).

xi. Interest rate: (7.35% real, 9.50% nominal).

6.2 Estimated Construction Costs

The total construction costs (nominal) is estimated at US$ 573,682,986 and US$ 860,524,479 for Rigid pavement 4-lanes and 6-lanes respectively. Construction for the same distance for Flexible pavement is estimated at US$ 419,603,269 and US$ 629,404,904 for 4-lanes and 6-lanes respectively. The estimated costs include costs for mobilization of equipment, machinery, plant and all other necessary resources for implementation of the project. The summary of construction costs for each option are illustrated in Table 6a below.

Table 6a: Estimated Construction Costs per Option

	Rigid Pavement		Flexible Pavement	
Cost Item	4-Lanes	6-Lanes	4-Lanes	6-Lanes
Earthwork	154,091,192	231,136,788	64,473,684	96,710,526
Pavement	198,846,374	298,269,561	95,175,439	142,763,158
Major structures	89,790,394	134,685,592	89,790,394	134,685,592
Minor Structures	36,099,025	54,148,537	36,099,025	54,148,537
Ancillary Roadworks	14,327,727	21,491,591	16,874,879	25,312,318
ITS system	9,581,537	14,372,305	9,581,537	14,372,305
General Items	38,060,139	57,090,209	43,826,827	65,740,240
Day-works	11,132	16,697	8,656,006	12,984,009
Contingencies	32,371,721	48,557,582	20,774,415	31,161,622
RAP	153,509	230,263	153,509	230,263
EMP	325,000	487,500	324,561	486,842
Supervision Cost	11,149	16,724	16,266,123	24,399,185
Design Cost	14,087	21,130	17,606,871	26,410,306
Total Construction (US$)	573,682,986	860,524,479	419,603,269	629,404,904
Total Construction (TZS bn)	1,307.997	1,961.995	956.695	1,435.043

The construction costs are closely similar to other projects with rigid and flexible pavements in the country. However, more detailed cost estimates will be done during the feasibility study.

6.3 Compensation Costs

The project will involve compensations for lands, vegetation, buildings and structures where the proposed road will pass through. Approximately US$ 15,383,667 and US$ 23,075,500 for 4-lanes and 6-lanes respectively will be used for compensation from Kibaha to Morogoro. The Government will incur cost for compensation to attract prospective investors.

6.4 Operating Costs

The costs cover routine maintenance costs, tolling costs, administration, staff costs and general expenses. The operating cost is calculated as 16.27% of the construction costs. The table 6c illustrates estimated period costs.

6.5 Periodic Maintenance Costs

During the operation of the project there will be major maintenance of the Expressway after 35 and 10 years period for rigid and flexible pavements respectively. Also there will be other periodic refurbishment costs for road furniture and other structures. The periodic maintenance costs are estimated at 36% and 85% of the construction cost for Rigid and Flexible respectively. The table 6c below illustrates estimated period costs for each option.

Table 6c: Estimated Operation and Maintenance Costs

	Rigid Pavement		**Flexible Pavement**	
Cost Item	4-Lanes	6-Lanes	4-Lanes	6-Lanes
Operation Cost (US$ m)	93,267,726	139,901,589	62,688,239	94,032,358
Maintenance Cost (US$)	206,344,527	308,201,764	327,464,375	491,196,562

Chart 6a: Operations and lifecycle Maintenance cost for Rigid Pavement

Chart 6b: Operations and lifecycle Maintenance cost for Flexible Pavement

6.6 Project Funding Structure

The **Table 6d** below summarizes funding requirements and source of funding for each option

	Rigid Pavement		Flexible Pavement	
	4-Lanes	**6-Lanes**	**4-Lanes**	**6-Lanes**
Funding Required				
Capital Expenditure: ICW	623.71	935.56	455.40	683.10
Finance raising fees	15.66	23.14	11.51	16.85
Concessionaire Costs - Development Period	45.31	45.31	45.31	45.31
Prefunding of DSRA (Snr Debt Tranche 1)	40.82	61.88	59.68	44.97
Capitalized Interest (Funded/Repaid by Senior Debt)	73.58	105.39	59.68	84.52
Total Funding Required (US$ m)	799.08	1,171.27	602.93	874.76
Funding Sources				
Equity Capital	158.46	232.36	119.40	173.32
Senior Debt - Tranche 1 (Including Capitalized Interest)	640.62	938.91	483.52	701.44
Total Funding (US$ m)	799.08	1,171.27	602.93	874.76

6.7 Sources of Project Revenue

The project has two sources of revenue

i. Revenue from traffic (user-pay per MV type such as Automobile, Busses, Goods vehicle and articulated truck).
ii. Revenue from rental of spaces (petrol station, charging station, main building, and truck rest area).

Chart 6b: Annual Revenue Mix per Vehicle Type

Projected Revenue

The project is expected to generate revenue from traffic and rental of space areas (buildings, petrol station, charging station, and truck rest area). The projected total nominal revenue during the whole concession period for both Rigid and Flexible pavement is summarizes on the table 6e below.

Table 6e: Projected Revenue for each option

	Rigid Pavement		**Flexible Pavement**	
Revenue Source	4-Lanes	6-Lanes	4-Lanes	6-Lanes
Revenue from Traffic (US$)	7,255,613,545	7,255,613,545	5,804,490,836	5,804,490,836
Revenue from Rental (US$)	189,593,072	189,593,072	189,593,072	189,593,072
Total Revenue (US$)	7,445,206,617	7,445,206,617	5,994,083,908	5,994,083,908

Projected Income Statement

The projected Income Statement indicates profitability of the project (revenue and costs). The income statements for each option are attached. *Annex G-i, G-iv, G-vi & G-ix* illustrates projected income statement during concession period.

Projected Cash flow

The projected cash flow measures the liquidity of the toll road project to meet its obligations including debt servicing when they fall due. The projected cash flows for this project are

sufficient to cover project obligations. *Annex G-ii, G-v, G-vii & G-x* illustrates projected cash flows during concession period.

6.8 Financial Viability

Viability of the project has been assessed using financial techniques such as Net Present Value (NPV), the Internal Rate of Return (IRR) and Pay Back Period (PBP) Approaches. These are the key financial indicators for the project. **The electronic copy of the Financial Model is accompanied with the submission.**

Net Present Value (NPV)

The project has positive NPV's for all options by assuming the discount at 9% for nominal and 5% real rates as calculated from the formula. The positive NPV's indicate that, it is worthwhile to undertake the project. **Table 6.3f** illustrates NPV's for all options under consideration.

Projected Internal Rate of Return (IRR)

The is one of the criteria that are considered on investments because it takes into account the time value of money using pre-tax and after tax cash flows. All options have IRR which are greater than costs of capital (interest rate). **Table 6.3f** indicates IRR for all options.

Projected Payback Period (PB)

The Payback Period indicates the amount of time that it takes for proposed toll road project to recover its initial investment, operations and maintenance costs. **Table 6.3f** indicates projected Payback for all options under consideration.

Projected Debt Service Coverage Ratio (DSCR)

DSCR measures the ability of project to repay its debts obligation using operating income. This translate that, the SPV will be able to service its debts liabilities when the fall due. **Table 6.3f** indicates projected DSCR for all options under consideration.

Table 6.3f: Project financial indictors

	Rigid Pavement		Flexible Pavement	
Indicator	4-Lanes	6-Lanes	4-Lanes	6-Lanes
IRR	11.87%	12.15%	11.96%	11.95%
NPV ($ m)	1,994	2,552	1,587	2,301
PB (Years)	16	26	15	24
DSCR	1.32x	1.29x	1.29x	1.29x

Note: The model has assumed the required IRR 17% for the project to be attractive for investors. Therefore, the project will require viability gap funding to meet the required IRR as indicated in the **Table 6.3g** below.

	Rigid Pavement		Flexible Pavement	
Indicator	4-Lanes	6-Lanes	4-Lanes	6-Lanes
VGF (US$) million	0.580	2.780	0.399	1.860

Benchmarking

The cost was generated from one of the project with the same property which is currently under construction along Lusitu – Mawengi. The approximated construction cost per kilometer along the Lusitu – Mawengi is about TZS 2.5 billion. Since our project have same property except additional facilities which is not done along Lusitu – Mawengi, then the cost is estimated to be TZS 3.4 billion per kilometer per single lane. The construction costs are closely similar to other expressways projects in developing countries, however more detailed cost estimates will be conducted during the feasibility study.

6.9 Sensitivity Analysis

In order to identify a pathway to addressing the Project's affordability shortfall, various capital cost scenarios have been considered to identify impact on the Unitary Payment and the projects affordability. The scenarios tested are changes on capital cost by -20% or +20% and changes on operating cost by –20% or +20%. The Private Party Financed Option has

been used to test the scenarios as this option is more expensive than the Government financed option. The tables below illustrates the outcome of the sensitivity analysis.

The outcome of this analysis indicates that in order for the Project to be affordable to the Government, the project cost must be reduced by around 20%. There must be appropriate strategies for cost reduction to make the project affordable and such strategies will be adopted in the final project scope.

6.10 Government Support

The Government is prepared to support the project through its various institutions which act as stakeholders for this project. Based on the financial model analysis, the project may require financial support for payment of compensation.

6.11 Affordability

The proposed PPP arrangement is a *'User-pay*. The willingness to pay survey was done to assess the rates. The rates used in the financial model (refer to the assumption) ranges from TZS 80 to 480 per km depending on the category of motor vehicles. In addition, the contracting authority has allocate sufficient funds for land acquisition and project preparation.

6.12 Value for Money

Qualitative VfM

The private party is expected to provide expertise and innovation during project implementation as TANROADS has inadequate skills and capacity such as value engineered designs which may reduce construction cost meanwhile improving quality and standard of the Works. In additional, funds for construction operation, and maintenance will be ensured contrary to TANROADS budget availability hence sustainability implementation of the project. Furthermore, the private sector will impart knowledge and new technology on implementation toll expressway projects to local staff. The Quantitative Value for Money

analysis will be conducted during the Feasibility study and appraisal for procurement of the competitive bidder.

6.13 Conclusion

The financial analysis for the proposed Toll road project indicates that the project is likely to be financially viable. Based on the above results, the project has Positive NPV, strong Internal Rate of Return (IRR) for all options is above 11%, which is above the cost of capital (currently estimated at 7.35%). In addition, the analysis indicates that the fee rates used in the financial model are affordable to the users and justifies for the financial viability of the project. Furthermore, implementation of project through PPP will provide qualitative value for money in terms of skills, capacity, financing and impart knowledge and new technology on implementation toll expressway projects to local staff. The Quantitative Value for Money analysis will be conducted during the Feasibility study and appraisal for procurement of the competitive bidder.

CHAPTER 7: ENVIRONMENTAL AND SOCIAL DUE DILIGENCE

7.1 Environmental and Social Impact Assessment (ESIA)

This is one of the planning tools used to facilitate and promote sustainable development by integrating environmental and social considerations in the decision-making process, ensuring unnecessary environmental damage is avoided, and optimising resources used and management opportunities. This chapter assesses environmental and social impact for the Kibaha – Chalinze - Morogoro Expressway Project (205 km).

The need and justification for the project have been prompted by the fact that the travel time along the Kibaha - Chalinze – Morogoro existing highway is highly affected by increasing traffic congestion, which hinders the country's socio-economic development.

Provision of the expressway parallel to the existing highway will increase the local people's opportunity to access social services and external markets for agricultural produce. In this regards, the project will lead to increased investments and trade within adjacent village centres and townships, hence improving the socio-economic conditions of the local people. Ultimately, the project is expected to contribute to the government’s efforts toward poverty alleviation among the local communities of the project area and the nation as a whole.

7.2 Community Engagement:

According to International best practices, community engagement starts with scoping phase and continues throughout the process. A stand-alone community engagement plan was developed for the project to help structure frequent communication with the community (Feasibility Study Report for Construction of Dar es Salaam – Chalinze expressway carried out by M/S Cheil Engineering Co. Ltd and Route identification and selection including land acquisition report prepared by TECU). Relevant stakeholders

were identified, including government and Non-government authorities at the National, Regional and District levels and local communities.

Community engagement is an integral and crucial part of implementing the Kibaha – Chalinze - Morogoro Expressway Project (205 km), aiming at assessing individuals, groups and organisations who will be affected by the project by indicating their views and concerns about the project. The Kibaha - Chalinze – Morogoro community involved a population of 150,000 people who were approached during a site visit. The respondents who are located at Kibaha, Maili-Moja, Mlandizi, Chalinze and Morogoro were engaged in sensitization and consultation forums.

The consultation forums involved different stakeholders, which include; motor vehicle owners, transporters association, local and ordinary individuals, traffic police officers, and local government leaders and majority of them responded as follows:

(a) Supported the idea of establishing a public-private partnership in constructing the expressway; and
(b) Expressed willingness to pay tolls for the services of expressway.

Some of them were concerned about the following issues:

(a) Adequate and timely payment of compensation may not be paid before implementation of the project;
(b) Road operators may raise transport costs and bus fares due to the tolling system; and
(c) Increase of HIV /AIDS infections during the project implementation.

7.3 Environmental Impact Assessment

The ESIA study aims to identify the environmental and social impacts that may occur due to the implementation of expressway and determine mitigation to avoid or minimise the adverse effects and maximise the benefit. This chapter summarises key points and findings of the Preliminary ESIA report, prepared by TANROADS in line with EIA and Audit Regulations, 2018, made under the Environmental Management Act, 2004.

The expressway is expected to reduce vehicle operating costs and travel times between Kibaha - Chalinze - Morogoro by addressing the persistent traffic congestion. The intention is to have a toll road, whereby road users will be charged for using the expressway. The proposed expressway shall be constructed separately from the existing Kibaha – Chalinze – Morogoro Highway to allow local traffic and the road users who may not be willing to pay road toll to continue using the existing road.

The Social and Environmental Assessment study for Kibaha – Chalinze – Morogoro Expressway (205km) was a `Rapid Assessment Study` of a few days' duration. It involved quick social and environmental screening along the project site, mainly through observation. Other approaches used to gather information were documentary reviews and public consultation meetings.

The project is expected to have some beneficial (positive) and adverse (negative) environmental impacts on the adjacent local communities, either directly or indirectly. The positive impacts shall be enhanced and negative impacts mitigated or minimised.

7.3.1 Positive and Negative Environmental Impacts

Road infrastructure development can cause positive and negative impacts on receptors. The significant environmental impacts identified for the proposed project included:

Table 7.1: Positive Environmental Impact

POSITIVE IMPACTS	ENHANCEMENT MEASURES
A. OPERATION PHASE	
Reduced air pollution	• TANROADS in collaboration with stakeholders will advocate use of road worth vehicles and clean fuels.

Table 2: Negative Environmental Impact Assessment

NEGATIVE IMPACTS	MITIGATION MEASURES
B. CONSTRUCTION PHASE	
B1: Air pollution	• Application of water on dusty diversion road, especially within residential areas during construction to minimize dust. • Provision of dust protection masks to construction workers.
B2: Noise nuisance and vibration	• Contractor will provide earplugs to construction workers. • Rock blasting will be carefully done within residential areas.
B3: Soil and water pollution	• Treatment of waste water before discharge into natural water courses. • Provision of drip pans at petroleum products dispensing points Storage of fuel, oils and chemicals on sealed surfaces. • Provision of bund walls around petroleum storage tanks to prevent spilled petroleum from escaping into the surrounding environment.
B4: Soil erosion and sedimentation of natural water courses.	• Proper design and construction of roadside drainages • Construction of roadside drains containing baffles, scour checks and rip rap to check water velocity. • Planting of grass on bare areas around the river banks immediately after construction
B5: Destruction of natural vegetation and trees.	• Contractor will confine construction activities within the right of way. • Planting of grass on bare areas around the river banks immediately after construction

7.4 Social Impact Assessment

The project is expected to have some beneficial (positive) and adverse (negative) social impacts to the adjacent local communities, either directly or indirectly. The positive social impacts shall be enhanced and negative impacts mitigated or minimized.

7.4.1 Positive Social Impacts

Table 7.2: Positive Social Impacts

POSITIVE IMPACTS	ENHANCEMENT MEASURES
B. CONSTRUCTION PHASE	
Job creation and improved employment opportunities during construction.	• Contractor will give employment priority to local people, especially for unskilled labour during construction. • Contractor will give equal employment opportunities to both women and men. • Contractor will avoid discrimination of any kind at workplace. • Contractor will promote health and safety education to unskilled and skilled labour. • Contractor will provide and make sure safety gears are used by the labourers during construction.
Increased income generation activities due to local people selling food and other items to construction workforce.	• Contractor will provide shelter ("Vibanda"), water supply and sanitary facilities to the food vendors to ensure that they sell food to construction workforce in a clean and hygienic environment.
C. OPERATION PHASE	
Reduced traffic congestion along existing Kibaha-Chalinze- Morogoro road	• TANROADS in collaboration with Toll Road Operator will promote the use of Toll road.
Reduced travel time between Kibaha – Chalinze- Morogoro	• TANROADS will ensure axle load is controlled along Toll road to make it durable.

POSITIVE IMPACTS	ENHANCEMENT MEASURES
Stimulation of local economic growth	• Local authority will promote investment, commercial activities trade in the project area.
Improved trade with neighbouring countries	• It will enhance trade between the neighbouring countries.
Improved transportation of cargo from Dar Port	• TANROADS will ensure axle load is controlled along Toll road to make it durable.

Table 7.3: Negative Impact of Social

NEGATIVE IMPACTS	MITIGATION MEASURES
A. MOBILZATION PHASE	
A1: Loss of farmlands, trees and other properties	• Payment of compensation to the affected people
A2: Disruption of infrastructure and public service utilities	• Relocation and restoration of affected infrastructure and public service utilities.
A3: Disruption of grave yards	• Relocation of grave yards or avoid grave yards.

NEGATIVE IMPACTS	MITIGATION MEASURES
B. CONSTRUCTION PHASE	
B1: Disruption of traffic flow during construction on existing roads	• Minimize traffic jam by executing traffic management plan, including deployment of personnel at crucial points to guide traffic movement.
	• Develop and implement traffic education and awareness programme for construction workers and local communities.

NEGATIVE IMPACTS	MITIGATION MEASURES
B2: Occupational Health and safety risks	• Installation of safety signal devices during construction. • Provision of safety gears top construction workers (E.g. helmets, boots, gloves etc.) • Provision of First Aid kit complete with medicine and managed by qualified personnel.
B3: Increased incidence of HIV/AIDS, STIs and COVID 19.	• Development and implementation of HIV / AIDS, STIs and COVID 19 prevention and control programme.
B4: Destruction of adjacent land use and properties	• Proper design and placement of storm water drainages.

NEGATIVE IMPACTS	MITIGATION MEASURES
C. DEMOBILIZATION PHASE	
C1: Loss of employment by local people	• Give employment priority to priority to local people to minimize number of new comers.
C2: Loss of income generating activities by local people	• Contract food selling services to local that are capable of providing such services to minimize number of food vendors who may move near the camp site. • Provide small scale business skills and capital to local people
C3: Creation of potential breeding sites for water borne disease transmitting vectors	• Provisions of drainage to all borrow pits before abandonment.
C4: Risk of accidents to livestock and people in abandoned borrow pits	• Reshaping of all borrow pits to reduce steep slopes or backfilling of all borrow pits with surrounding soils.
C5: Severance of community access to and from their residential areas.	• Provision of concrete slabs or culverts across roadside drainage channels at public crossing points.

NEGATIVE IMPACTS	MITIGATION MEASURES
D. OPERATION PHASE	

NEGATIVE IMPACTS	MITIGATION MEASURES
Increased risk of traffic related accidents	• Installation of road signs and speed calming facilities. • Public awareness on the use of infrastructure.
Increased prevalence of HIV/AIDS, STIs and COVID 19.	• Intensify HIV / AIDS, STIs, and COVID 19 prevention campaigns among the local people
Encroachment by people into the road reserve.	• Provide full access control to prevent encroachment. • Provide underpass and overpass for people and livestock • Public awareness on encroachment on road reserve

7.5 Environmental and Social Management Plan (ESMP)

The ESMP specifies mitigation measures to be taken during various project implementation phases to offset or minimise them to acceptable levels. ESMP summarises all anticipated significant adverse environmental impacts and provides responsibilities for implementing mitigation measures and cost estimates. The total cost for implementation of ESMP has been estimated to be about TZS 141,191,650,109.71 which is equivalent to 10% of total project construction cost. The cost estimates for environmental management have been based on the valuation report and the consultant's experience on projects of similar nature.

This Environmental and Social Management Plan (ESMP) aims to ensure that the project is being implemented with minimum adverse environmental and social impacts. The ESMP focuses on avoiding or mitigating potential impacts associated with the project activities and enhancing project benefits.

The role of ESMP is to outline environmental requirements for the project and provide guidance for the Contractor to follow and adequately manage environmental impacts during construction. It specifies mitigation, monitoring, and institutional measures to be

taken during construction and operation phases to eliminate any adverse environmental and social impacts, offset them or reduce them to acceptable levels.

In order to have effective ESMP, there should be an integration of efforts among various stakeholders. This ESMP, therefore, specifies the roles and responsibilities of multiple stakeholders during implementation. However, all responsible agencies/stakeholders must appreciate that they are united and should interact and work towards a common purpose.

The important stakeholders/agencies identified in this ESMP include the Tanzania National Roads Agency (TANROADS); the Supervision Consultants; the Contractor; the Local Government Authorities (LGAs), local communities and Local NGOs / CBOs dealing with project-related environmental and social aspects in the project area.

The effective implementation of ESMP also requires that all persons working on the project are aware of the importance of environmental and social requirements of the project; their roles and responsibilities in the implementation of the ESMP. They should also be aware of their work activities' significant actual or potential environmental impacts, the benefits of improved performance and the consequence of not complying with environmental requirements.

An Environmental and Social Impact Management Plan (ESMP) will be developed specifically for this project (covering construction and operation phases) to manage the adverse impacts on the environment. The ESMP will be prepared based on international and national policies and regulations. The ESMP includes a description of the mitigation measures to avoid, minimise or compensate for the adverse impacts during the construction and operation phases of the project; responsible parties for the implementation of the mitigation measures; the timing of implementation and monitoring and audit requirements. The ESMP focuses on avoiding impacts, and where this is not possible, presents technically and financially feasible and cost-effective mitigation

measures to minimise the potential effects to acceptable levels.

The ESMP will be kept up to date with any required additional mitigation throughout the project and to reflect the requirements of new and amended laws and regulations.

7.6 Environmental and Social Monitoring Plan

The environmental monitoring during the construction phase will be comprised of two activities:

- Review the SPV plans, methods statement, and temporary works design and arrangements to ensure that environmental protection measures specified in the contract documents are adopted. The contractor's proposals provide acceptable levels of impact control.

- Systematic observation of all site activities and the Contractor's offsite facilities, including borrow pits and quarry site areas. Ensure that the contract requirements relating to environmental matters are complied with and that no foreseen or unforeseen impacts are occurring.

The monitoring activities will be comprised of visual observation during the site inspection and will be carried out simultaneously with engineering supervision activities. In addition to visual observation, there shall be an informal questioning of members of the local communities and their leaders who live adjacent to the road alignment. The monitoring plan will also be integrated with other construction supervision and carried out by the Implementing Agency's Engineer.

7.7 Grievance Redress Mechanism

A Grievance Management Procedure will be established to ensure that all comments, suggestions and objections received from the project stakeholders, especially from

nearby surrounding communities and facilities, are dealt with appropriately and promptly. It is important to note that there will also be a separate grievance management procedure for workers/employees during the construction and operation phases and for road users during the operation phase. Specific to the operation phase, it is essential to mention that the Contracting Authority will only be responsible for the management of grievances related to the services it provides and also grievances of workers that are working on this project; Local communities will be informed about the grievance management system during the consultation and disclosure activities. All grievances will be recorded, responded and resolved in a defined timeframe.

Table 7.5: Cost Related to Mitigation Measures

S/n	Impacts	Mitigation Measures	TARGET LEVEL	Implementors	Cost Estimates (Tzs)
A. MOBILZATION PHASE					
01	A1: Loss of properties	Payment of compensation to the affected people	All affected people timely compensated.	TANROADS in collaboration with LGAs and affected people.	35,032,000,000.00
02	A2 : Disruption infrastructure and utilities	Relocation and restoration of affected infrastructure and utilities.	Relocation and restoration of affected infrastructure and utilities timely completed.	TANROADS in collaboration with relevant authorities.	350,000,000.00
B. CONSTRUCTION P HASE					
01	B1 : Air pollution	• Application of water on dusty diversion road, especially within residential areas during construction	• Application of water on dusty diversion roads, especially within residential areas during constructio	SPV	

S/n	Impacts	Mitigation Measures	TARGET LEVEL	Implementors	Cost Estimates (Tzs)
		to minimize dust. • Provision of dust protection masks to construction workers.	n to minimize dust done consistently . Dust protection masks to construction workers timely provided.		
02	B2 : Noise nuisance and vibration	Contractor will provide earplugs to construction workers.	• Earplugs to constructio n workers timely provided.	SPV	20,000,000.00
03	B3: Soil and water pollution	• Treatment of waste water before discharge into the river. • Provision of drip pans at petroleum products dispensing points • Storage of fuel, oils and chemicals on sealed surfaces. • Provision of bund walls around petroleum storage tanks to prevent spilled	• Waste water before discharge into the river treated timely. • Drip pans at petroleum products dispensing points provided. • Storage of fuel, oils and chemicals on sealed surfaces well allocated. • Bund walls around petroleum storage	SPV	20,000,000.00

S/n	Impacts	Mitigation Measures	TARGET LEVEL	Implementors	Cost Estimates (Tzs)
		petroleum from escaping into the surrounding environment.	tanks to prevent spilled petroleum from escaping into the surrounding environment provided.		
04	B4 : : Soil erosion and sedimentation of stream / river bed	• Proper design and construction of roadside drainages • Construction of roadside drains containing baffles, scour checks and rip rap to check water velocity.	• Proper design and construction of roadside drainages provided. • Roadside drains containing baffles and rip rap to check water velocity constructed.	SPV	50,000,000.00
05	B5: Occupational Health and safety risks	• Installation of safety signal devices during construction. • Provision of safety gears top construction workers (E.g.	• Proper signs and Safety signal devices during construction installed. • Safety gears to construction workers (E.g.	SPV	50,000,000.00

S/n	Impacts	Mitigation Measures	TARGET LEVEL	Implementors	Cost Estimates (Tzs)
		helmets, boots, gloves etc.) • Provision of First Aid kit complete with medicine and managed by qualified personnel.	helmets, boots, gloves etc.) timely provided. • First Aid kit complete with medicine and managed by qualified personnel timely provided.		
06	B 6: Increased incidence of HIV/AIDS, STIs and COVID-19 pandemic.	Development and,	HIV / AIDS prevention and control programme developed and implemented and implement safety gears to prevent COVID-19	SPV in collaboration with HIV / AIDS agency and Supervised by Resident Engineer.	150,000,000.00
07	B7 : Destruction of adjacent land use and properties.	Proper design and placement of storm water drainages	Storm water drainages properly designed and placed.	SPV	Not Applicable
C. DEMOBILIZATION P HASE					
01	C1 : Loss of employment by local people	• Give employment priority to local people to minimize number of new comers. • Payment of contribution to security funds for all	• Local people employed as much as possible. • All payments of contribution to security funds timely paid.	SPV	Not applicable

S/n	Impacts	Mitigation Measures	TARGET LEVEL	Implementors	Cost Estimates (Tzs)
		workers during employment. • Payment of terminal benefits to all workers before termination.	• All payments of terminal benefits to all workers timely paid.		
02	C2 : Loss of income generating	Contract food selling services to local that are capable of providing such services to minimize number of food vendors who may move near the camp site.	Food selling services provided by locals.	Concessionaire Supervised by Resident Engineer.	Not applicable
03	C3 : Creation of potential breeding sites for water borne disease transmitting vectors	Provisions of drainage to all borrow pits before abandonment.	Drainage to all borrow pits provided before abandonment.	SPV	Not applicable
04	C4 : Risk of accidents to livestock and people in abandoned borrow pits	Reshaping of all borrows pits to reduce steep slopes and backfilling of all borrow pits with surrounding soils.	All borrow pits reshaped to reduce steep slopes and backfilling done using surrounding soils.	SPV	250,000,000.00
05	**C5 : Severance of community movement.**	Provision of concrete slabs or culverts across roadside drainage channels at public crossing points.	Concrete slabs or culverts provided across roadside drainage channels at public crossing points.	SPV.	100,000,000.00

S/n	Impacts	Mitigation Measures	TARGET LEVEL	Implementors	Cost Estimates (Tzs)
D. OPERATION PHASE					
01	D1 : Increased risk of traffic related accidents	• Putting road signs to warn motorists of crossing. • Impose speed limits. • Contractor will formulate and implement road traffic safety education and awareness campaign.	• Appropriate warning road signs provided. • Education on road safety education and awareness provided by the contractor.	SPV	80,000,000.00
02	D2 : Increased prevalence of HIV / AIDS	• Intensify HIV / AIDS prevention campaigns among the local people	• HIV/AIDS prevention campaigns provided to local people by the contractor.	LGAs in collaboration with local NGOs./CBOs	Not applicable

7.8 CONCLUSION

A review of the findings, including the positive and negative impacts, indicates that the project is likely to be socially and environmentally viable.

The following need to be addressed further during the feasibility study:

1. Compensation for PAPs needs to be done comprehensively using the relevant government procedures.

2. A program and budget need to be established for awareness and prevention of HIV/AIDS, STIs, COVID 19, and Occupational Health and safety risks.

3. The detailed designs need to address the identified infrastructure interventions.

CHAPTER 8: PRELIMINARY LEGAL DUE DILIGENCE

8.1 Legal Environment

This Chapter reviews both statutory and procedural laws of Tanzania pertaining to the PPP projects, particularly provisions enabling a public body to enter into PPP arrangement. It also reviews rules and regulations in relations to approvals, permits, licenses and other mandatory procedures. The analysis will ensure that all foreseeable legal requirements are met to enable proper procurement, negotiations and conclusion of a PPP Agreement. The relevant legislations are analysed below.

8.1.1 The Executive Agencies Act, CAP 245 (RE 2020)

The Executive Agencies Act is enabling law for the establishment of various Executive Agencies in the country. Tanzania National Roads Agency (TANROADS), is established through the Executive Agencies (Tanzania National Roads Agency) (Establishment) Order GN 293 of 2000 as amended by the Executive Agencies (The Tanzania National Roads Agency) (Establishment) (Amendment) Order, GN 232 of 2020.

Pursuant to Rule 2.1 of the Order, TANROADS was declared a Road Authority within the meaning of the Roads Act 2007 (by then the Highways Act, CAP 169) in respect of the Trunk and Regional roads network in the Tanzania Mainland. Rule 3 (6) of the Order gives TANROADS legal capacity, among other functions, to enter into contracts, including PPP agreements.

8.1.2 The Roads Act, No. 11 of 2007

The Roads Act in Section 6 (1) provides that TANROADS as the road authority shall be responsible for development, maintenance and management of public roads and related facilities. The functions of TANROADS are set out in Section 6 (2) of the Act, among others,

"c" to negotiate concession agreement with private party entities to facilitates financing and development of selected roads in accordance with guidelines prescribed by the minister".

It is clear from the above provisions, namely Rule 2.1 of the Establishment Order and Section 6 (2)(c) of the Roads Act, TANROADS being the road authority has

full mandate and capacity to enter into agreements with private entities under PPP arrangement including the proposed Expressway project.

8.1.3 The Road and Fuel Toll Act, (CAP 220 RE 2022)

This legislation is relevant in facilitating the operation of the PPP project as regards to collecting road toll. Rule 3.3 (h) of the Establishment Order empower TANROADS to undertake and operate toll roads. However, there is no specific provision that confer TANROADS authority to levy and collect road tolls. Under this Act, the Commissioner being the Permanent Secretary to the Treasury, is responsible for the administration and collection of road and fuel tolls and can appoint public officers to be toll collectors. Section 11 (2) of the Act provide an exception in terms of which all persons supplying fuel in bulk to a fuel filling station are by law toll collectors in relation to that station.

Therefore, since the law does not recognize TANROADS as toll collecting agent, it would be necessary to set modality of toll collection or to appoint TANROADS as a toll collector under the Act, so that it can contractually delegate this function to the Private party in the PPP project.

8.1.4 The Government Loans, Guarantees and Grants Act, 1974 (CAP 134).

This Act as amended by Written Laws (Miscellaneous Amendments) Act, 2017 (No. 2 of 2017) and the Finance Act, 2022 (No. 5 of 2022), contains provisions relating to the loans, guarantees by government and acceptance of grants made to the Government. Section 13 empower the minister responsible for finance to guarantee for and on behalf of the Government, the repayment of the principal money and any loan raised either within or from non-resident sources by a parastatal organization or any other body corporate in public interest.

A *"parastatal organization"* is defined to mean a body corporate established by or under any Act other than the Companies Act and any company registered under the Companies Act not less than fifty percent of issued share capital of which is

owned by the Government or parastatal organization. This is clear that the Minister cannot guarantee a company whose majority shares are owned by a private party.

At this juncture, a notable impediment is that the SPV company to be registered with majority share capital owned by private investor in PPP arrangement, will not qualify to be guaranteed by the Government unless the Government or parastatal organization own not less than fifty percent of issued share capital of the company.

8.1.5 Natural Wealth and Resources Contracts (Review and Re-Negotiation of Unconscionable Terms) Act, 2017

This Act contains provisions to ensure that the natural wealth and resources of the United Republic are used for the greatest benefit and welfare of the People of the United Republic by ensuring that all arrangements or agreements by the Government protect interest of the People and the country therefore promoting the rights of development and self-determination.

In respect of dispute resolutions, the Act reiterated that all disputes arising on contractual relationships relating to natural resources must be adjudicated by judicial bodies and organs established in the country

8.1.6 Public Private Partnership Act, 2018 (CAP 103 RE 2022)

The PPP Act, No. 18 of 2010 as amended and revised in 2018 (CAP 103 RE 2018 (The PPP Act), is the specific legislation for PPP projects in Tanzania that provides for institutional framework for the implementation of PPP Agreements. It also sets rules guidelines and procedures governing PPP procurement, development and implementation of Public Private Partnership.

It establishes the PPP Centre and the PPP Steering Committee and their functions under Sections 4 and 7 respectively and stipulates the functions of the accounting officer under Section 19. The Act addresses the issue of procurement of private parties and transaction

advisors and creates the requirement for competitive bidding in all projects and set requirement for vetting of PPP contract by the Attorney General.

The Act further sets the manner in which disputes under PPP Agreements will be resolved, whereby Section 22 provides that all disputes shall be resolved through negotiation, and in case of mediation or arbitration be adjudicated by judicial bodies or other organs established in the United Republic of Tanzania and in accordance with the laws of Tanzania.

The Public Private Partnership Regulations, 2020 sets a requirement for the appointment of the Project Officer and the project management team members (see Regulation 23 and 24). The Regulations also indicate the manner to identify a project, procedure and timeline for conducting concept notes, pre-feasibility and feasibility studies, procurement process, submission and evaluation of expressions of interest, request for proposals, negotiations, monitoring and evaluation, and hand-back.

The issue in this law is Section 22 which limits the adjudication of Mediation or Arbitration through organs established in the country. This might be an impediment to the project as it is difficult for the Private Party to accept such limitation in the dispute settlement mechanism.

8.1.7 The Arbitration Act, 2020 (CAP 15 RE 2022).

This Act is the basic arbitration law in Tanzania with provisions regarding dispute resolution mechanisms. It aims at obtaining the fair resolution of disputes by an impartial arbitral tribunal without undue delay or unreasonable expense and promote consistency between domestic and international arbitration. It has provisions for enforcement of foreign arbitral Awards.

"*Domestic Arbitration*" is defined as the arbitration that involves a body corporate incorporated in Mainland Tanzania, or that which its central management and control is exercised in Mainland Tanzania, or a substantial part of its obligation is to be performed in Mainland Tanzania or when the subject matter of the dispute is in Mainland Tanzania.

"*International arbitration*" is an arbitration relating to disputes arising out of legal relationships where at least one of the parties is a national of country or a body corporate incorporated or whose central management and control is exercised in any country other than the United Republic; or the Government of a foreign country.

The Act establishes a Tanzania Arbitration Centre under section 77.

8.1.8 The National Economic Empowerment Act, No. 16 of 2004

The Act was established to promote and facilitate economic initiatives to empower Tanzanians. The Act establishes the National Economic Empowerment Council (NEEC) with duty to develop strategic institutional framework, facilitate economic empowerment and provide guidelines to support plan and coordination of both the sector and multi sector.

Any organization carrying out economic activities in Tanzania must register with this Council, submit performance reports on economic activities and create employment for women and disadvantaged persons in accordance with the Tanzania Development Vision 2025 goals.

8.1.9 The Public Procurement Act, No. 9 of 2011 (CAP 410 R.E. 2022)

The Act provides regulatory aspects critical to public procurement and applicable to procurements financed by Public funds. It sets a system for a fair, open, transparent, accountable and competitive procurement. The Act establishes the Public Procurement Regulatory Authority (PPRA) which has power to regulate, review procurement complaints and monitor compliance of procuring entities.

Pursuant to the PPA Act, the Public Procurement Regulations, 2013 as amended, elaborates the procedures and timeline for tendering process under different types of procurements. They also provide for appeal mechanism under Regulations 105 to 107 that can be applicable to the resolution of PPP disputes as well.

8.1.10 Employment and Labour Relations Act, 2004 (ELRA) and Labour Institutions Act, 2004 (LIA) (CAP 300 R.E. 2022)

These are the main legislations that govern employment matters in Tanzania. The ELRA and its Rules provide for the rights and obligations of employees and employers, type of wages, the employment contract, types of leave, holiday, probation, termination procedure and trade unions affairs. The LIA and its rules provide for the labour dispute institution mechanism through mediation and arbitration proceedings.

The Private partners in this project will be required to comply with these legislations while engaging employees to carry out the construction and management of the PPP project.

8.1.11 Land Transport Regulatory Authority Act, 2019, No. 3 of 2019.

This law regulates land transport services in the country and establish the Land Regulatory Authority (LATRA) with among others, has power to issue, renew and cancel permits; regulate rates and charges of the land transport sector; and register crew and certify drivers.

Under Section 19, in setting rates and charges, LATRA is required to take into account the costs of the service, competitive rates and any international benchmarks for prices, costs, return on assets in comparable industries, consumers and investors interest.

8.1.12 The Contractors Registration Act, No. 17 of 1997

This Act creates the requirement and manner for registration of contractors in Tanzania. It establishes the Contractors Registration Board (CRB) to regulate the conduct of contractors in the country.

8.1.13 Engineers Registration Act, 1997 & Architectures and Quantity Surveyors Registration Act, 2010

It is worth noting that both legislations have mandatory provisions requiring Engineers and Quantity surveyors to register in their respective professional boards in the country,

hence the PPP project investor will be required to employ qualified engineers and quantity surveyors pursuant to his law.

8.1.14 The Value Added Tax Act, 2014 (CAP 148 RE 2022)

Generally, the Act provides for legal framework for the imposition and collection of administration and management of the Value Added Tax (VAT) and for related matters. The Act further elaborate on issues concerning VAT on imports and supplies, registration for TIN number, place of taxation, returns, payments and refunds in terms of procedures and timelines concerning VAT and its related matters.

8.1.15 The Income Tax Act, 2004 (CAP 332 RE 2022)

It provides for the charge, assessment and collection of Income Tax and the ascertainment of the income to be charged together with other tax related matters. The Act covers among others; issues concerning withholding and corporate taxes. It further provides for procedures and timelines concerning Income Tax and its related matters.

8.1.16 The Finance Act, 2022 (No. 5 of 2022)

This Act imposes and alters certain taxes, duties, levies, fees and amends certain written laws relating to the collection and management of public revenues. The investor is expected to abide with the mentioned taxes under this law as well.

8.1.17 Bank of Tanzania Act, 2006

This Act as amended provides for responsive regulatory role of Bank of Tanzania (BoT) in formulation and implementation of monetary policy, supervision of other Banks and financial institution, exchange rate policy, mortgage financing and deal, hold, and manage gold and foreign exchange reserves of Tanzania.

Under Section 54 the BoT administers any payment agreement entered into by the Government. In Section 67 of the Act, all assets including local and foreign currencies held or deposited or managed by the Bank shall be immune from any enforcement

proceeding and no execution, attachment or similar process issued by any court for enforcing payment.

Under this protection of law, money and assets of the Government held or deposited with the BOT are safe and its clients are assured to be paid whenever they require payments, including any charges to be collected and deposited in the escrow account with the BoT.

8.1.18 Tanzania Investment Act, 1997

This Act is the main legislation on matters relating to investment in Tanzania. It creates provisions for investment environment and favourable conditions for investors. It establishes the Tanzania Investment Centre (TIC) an agency of Government which is a one-stop centre for investors and investment related functions in the country for both local and foreign investors.

8.1.1. The Land Act, 1999 (CAP. 113 R.E. 2022) and Regulations of 2001.

The Land Act is the main legislation that governs, among others, classification and tenure of land, administration, disposition of land through sale, lease, mortgages, and rights of occupancy and regularization of interests of land.

Section 156 of the Act requires paying compensation to affected persons once the land they occupy is acquired. According to Regulation 13.2 of the Land Regulations, the Government is required to pay compensation within 6 months of conducting the evaluation of the land. Other crucial legislations in acquiring land are the Village Land Act, (CAP 114 RE 2022) and the Land Acquisition Act, No.47 of 1967 CAP 118 RE 2022, among others.

8.1.19 The Mining Act No. 15 of 2010 (CAP 123 RE 2022).

The Act has put mandatory requirement under Section 28 (1) and (3) to apply for primary mining license (PML) for construction materials.

A notable problem here is that some pieces of land with potential construction materials are owned by individual persons holding PML issued under this Act. In event the areas will be needed for taking construction materials or re-alignment of road, the same may increase compensation or re-alignment costs of the land transport sector of the land transport sector and ultimately increase project costs.

8.1.20 The Companies Act, No. 12 of 2002.

This Act governs registration and operation of Public and Private Companies in Tanzania. It should be noted that the Special Purpose Vehicle (SPV) Company to be established shall require prior registration with the Business Registration and Licensing Authority (BRELA). It is important to note that, this is not an exhaustive list of all the laws and regulations to be observed under the PPP Project. Efforts will be in place to observe the entire relevant legislations and others passed by the Government from time to time.

8.1.21 Permits and Licenses

Subsequent to the approval of the PPP project by the Ministry responsible for roads and other designated organs under PPP Act, there are necessary permits and licenses which are expected to be secured by the Private party, which has already been identified in the course of reviewing relevant laws above.

8.2 Legal Viability:

The available laws and institutions make the undertaking of the project to be within the legal framework. To be specific, the Establishment Order G.N. 293 as amended which establishing the Agency as the road authority together with the Roads Act 2007, give TANROADS legal capacity to engage in PPP projects. Therefore, this PPP Expressway project is legally viable.

Despite existence of legal regime as discussed above, the detailed legal due diligence will be conducted during the feasibility study.

8.3 Project Readiness

TANROADS project team is sufficiently capable of carrying out the project at hand. This is due to the fact that there is planning process, adequacy and training of project personnel, availability and reserve of project road, support services and systems. Also, the existing project schedule may be reviewed, team skills be enhanced through training so as to enable the institution to implement the project.

8.4 Ownership of the Land

TANROADS should seek allocation of sufficient funds for acquisition and compensation of land to be required for the corridor of the expressway pursuant to the Land Acquisition Act and Land Act in order to carry out the proposed PPP project.

8.5 Concluding Remarks

This proposed PPP project is required to comply with mandatory legal requirements in the country. The issues addressed above should be resolved in time to attract investment and kick-off of the project.

In conclusion therefore, the project is legally viable as it complies with all relevant statutory legislations and Regulations within the United Republic of Tanzania.

CHAPTER 9: INSTITUTIONAL ANALYSIS

9.1 Stakeholders Roles and Responsibility

The objective of this chapter is to carry out an analysis, to identify main stakeholders, align their expectations with the project deliverables and plan better to meet and exceed their expectations. In this context, Stakeholders are parties interested in the development of the project. The table below, stipulate the main stakeholders who are expected to be involved to support and manage the project implementation. The identified stakeholders include; regulators, approval authorities and other key stakeholders relevant to Public Private Partnership (PPP) arrangement.

Table 9.1: Stakeholders Roles and Responsibilities

No.	Institution	Roles and Responsibilities
1	Contracting Authority (TANROADS)	Project development, signing PPP contract with the private party and managing PPP contract.
	Private Sector	Project implementer.
2	Ministry of Works and Transport (MoWT)	For policy, guidance and recommendation of the Project.
3	Ministry of Finance and Planning ('MoFP')	The MoFP is responsible for managing PPP programs.
4	PPP Steering Committee	It is responsible for reviewing and approving project feasibility study, detailed project report and design, selection of preferred bidder, PPP agreement or amendments to the agreement.
5	Office of the Attorney General (OAG)	To vet PPP Agreement and issues legal opinion in regard to the project if any.
6	Regulatory Authorities	• LATRA - To regulate land transport sector • TASAC – To regulate shipping business services provided in Mainland Tanzania. • NEMC • Fair Competition • PPRA • OSHA
7	Ministry of Home Affairs	Provide security guidance and Issue of residency permits to foreign expatriates through immigration department
8	Tanzania Investment Centre (TIC)	For investment guidance, promote/ market the project proposal and provide necessary project facilitation services under one stop facilitation

No.	Institution	Roles and Responsibilities
		centre such as registrations, licenses and permits during implementation of the project
	PPP Centre	Analysis of project concept note, Pre-feasibility study, Feasibility Study, tendering documents, PPP agreements and advice PPP Steering Committee accordingly.
9	Business Registration and Licensing Agency (BRELA)	For business registration
10	Public Procurement Regulatory Authority (PPRA)	Overseeing for adherence of public procurement regulation and issuing standards.
11	Ministry of Lands, Housing and Human Settlements Development (MLHHSD)	For land issues settlement and grant certificate of the right of Occupancy
12	Local Government Authority (Municipal Council)	Sensitization and awareness creation to the public and issuance of building permit, land acquisition, royalty collection and collection of revenue at bus stands.
13	National Environmental Management Council (NEMC)	To enforce compliance on environmental management.
14	Contractors Registration Board (CRB)	For registration of Contractors and projects as well as monitoring Contractors performance.
15	Engineers Registration Board (ERB)	Registration of Engineers and monitor performance of Engineers.
16	Occupational Safety and Health Authority (OSHA)	To enforce compliance of health and safety issues at working places
17	Utility Service Providers (TANESCO, Water Utilities, TELECOM, GAS)	For supply of services in their respective areas of specialization to the project
18	Tenants/Business Owners/airlines	Involve in sharing experience and giving advices on the project
19	General Public	Key stakeholders and Beneficiaries of the Project
20	Trade or Labour Groups	To advocate on behalf of the workers so that the workers can get better wages and regulating relationships between the employees and the employer.

No.	Institution	Roles and Responsibilities
21	Consumer Associations (LATRA Consultative Council, TATOA, TABOA etc)	To advocate interest of transporters and related stakeholders.
	Development Partners	To support PPP projects and Capacity building
22	Financial Institutions, Social Security Funds and Insurance Companies	Responsible for providing financial supports towards project implementation.
23	TRC, TAZARA, TAZAMA and TPA	Sharing common interests during preparation and execution of the expressway project.
24	TRA	Provide guidance on tax related matters during execution of the expressway project.
28	AQRB	Registration of Architects and Quantity Surveyors
30	Ministry responsible for Foreign Affairs	Facilitate international relation matters.

Readiness of Stakeholders

There is a readiness from the identified stakeholders to support the project though, they have shown their concerns about budgets for relocating which was not planned for. In addressing those concerns the CA has set aside funds meet costs for relocation.

CHAPTER 10: NEXT STEPS

10.1 Conclusion and Next Steps

The efficient road network is strongly correlated with socio-economic growth. This project will enhance the country competitiveness in the local and global economic environment and ultimately improve life standard of the citizens. The analysis conducted on technical, legal, economical, commercial, financial and strategical aspects demonstrate that the proposed PPP is likely to be viable. However, there are remaining critical issues to be addressed prior to the implementation of the project as follows: -

i. The government should consider for tax exemptions on importation of construction materials and equipment;
ii. The CA should make proper arrangement and capacity building and training of staff who will be involved in the project;
iii. The Government should allocate enough funds for timely acquisition of the land needed for the project to avoid delays in its implementation;
iv. Comprehensive awareness to the community during implementation of the project to mitigate HIV /AIDS infections
v. Awareness on the project benefits to the community and transporters to mitigate risk of raising transport costs as a result of introduction of the tolling system,
vi. More study to establish the best modality of revenue collection from the project

10.2 Implementation Plan

The Project implementation plan and timelines for next activities including procurement process for the PPP Advisor and private partner and commencement of the project as detailed in **Table 21** below shows the procurement plan for Kibaha – Mlandizi – Chalinze – Morogoro Expressway (205 km).

10.3 Procurement Strategy

The proposed procurement strategy aims at an international competitive bidding process in accordance with the Tanzanian PPP policy, law and regulations. It would involve two phases: prequalification stage and proposal stage. We propose a two-envelope system with separate technical and financial proposals. We recommend proposal evaluation, as pass/fail for technical and a scoring for the financial proposal.

As financial-bidding variables, we could consider the bid parameter, which could be either the end-user fees proposed (the lower the better), a revenue sharing percentage (the higher the better). The decision on this will be addressed in the feasibility study phase.

Finally, in the procurement process, we recommend to pay attention to the structure of a consortium combining, for example, a developer, an EPC contractor and an O&M contractor. It is crucial the Project has adequate experience in all the PPP components, i.e., DBFOMT, and a sound financial position. Bid bonds or similar arrangements requiring bidders to commit to the terms of their bids should be considered.

The potential bidders will be provided guidance during the procurement process in order to improve participation by providing briefing sessions on what is involved in a PPP. Also, template financial models and draft PPP agreement will be shared with the bidders.

10.4 Project Procurement Plan

The plan consists of the following main stages:

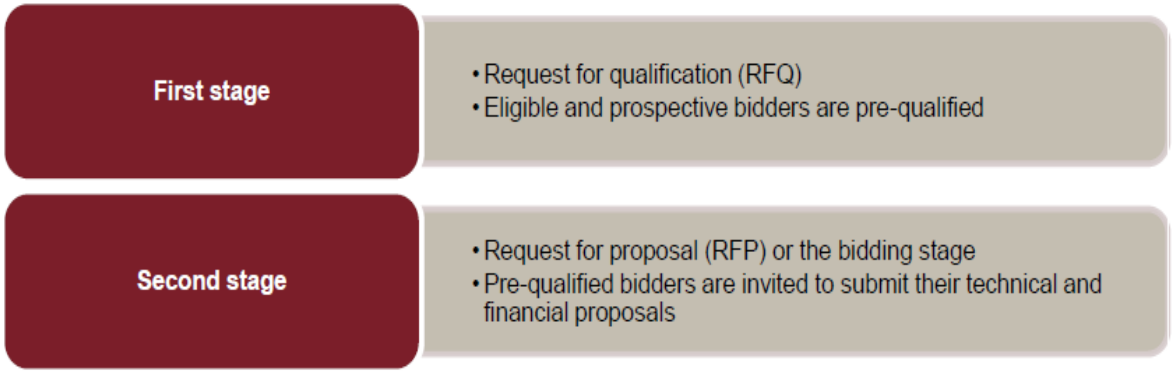
i. ***Stage 1 – Appointment of transaction advisor –*** After the submission and approval of the final pre-feasibility-assessment report prepared by the technical and financial consultants, the CA - (TANROADS) floats a request for qualification (RFQ). RFQs submitted will be evaluated and then the request for proposal (RFP) would be floated to select the most suitable transaction advisor on quality cost-based selection (QCBS) basis. In the QCBS method, a transaction advisor is selected on the basis of technical and financial qualifications.

ii. ***Stage 2 – Feasibility study and final procurement plan*** – The selected transaction advisor would be responsible for carrying out a detailed feasibility study, including the social and environmental study. After the approval of the same by the CA and PPP Centre, the transaction advisor, in conjunction with the Project procurement team of CA, will proceed to the next stage and prepare a detailed procurement plan with well-defined timelines.

iii. ***Stage 3 – Prequalification stage*** – In this phase, the bidding documents including the RFQ, RFP and draft PPP agreement are prepared. The procurement will be conducted in accordance with the PPP Policy, 2009, PPP Act 2010 and PPP Regulations 2020. According to the PPP Act 2010, a two-stage open tender process needs to be adopted. In line with the PPP Policy 2009 and the PPP Act 2010, RFQ will be issued as an advertisement for the pre-qualification stage and short-listing qualified bidders.

iv. ***Stage 4 – Bidding phase*** – The shortlisted bidders will be issued RFPs which will mention bidding details and presentation of the financial and technical bid. Preferably, a draft PPP agreement will also be issued in the bidding phase and bidders asked to seek clarifications on the same so that the PPP agreement can be finalized and final negotiations with the preferred bidder are minimal.

A bidders' conference should preferably be organized, in which the shortlisted bidders can raise questions. Two-envelope system separating financial and technical bids is recommended. The technical proposals should preferably be assessed on a pass/fail basis. Only the technical proposals that pass will proceed to the opening of their financial proposals.



v. ***Stage 5 – Signing of the PPP agreement*** – TANROADS will be the Contracting Authority. The Private part and TANROADS will be the signatories to the PPP agreement. TANROADS is responsible for:

a) Measuring outputs of the PPP agreement;

b) Monitoring implementation of PPP agreement and performance of ProjectCo;

c) Overseeing day-to-day management of the PPP agreement;

d) Reporting on the PPP agreement in the contracting authority's annual report.

For any material amendments in the PPP agreement, approval of the PPP Centre under MoFP is required. The PPP Centre shall provide a variation only if it is satisfied that the PPP agreement, after the amendments, will continue to provide Value for Money, affordability, substantial technical, operational and financial risk transfer to the Private part.

vi. ***Stage 6 – Monitoring during the construction period*** – During the construction period, the CA may appoint an owner's engineer with the required experience to review the designs prepared by the Private part, provide recommendations for approval of the design and supervise the construction works to ensure that the development of facilities meets the standards and specifications provided for in the PPP agreement. The owner's engineer shall provide periodic reports and updates to the municipal council regarding the progress of the construction till the commission of the facilities.

10.5 Preliminary Procurement Schedule

The tentative procurement schedule presents the main tasks of procuring a transaction advisor, issuing request for qualifications, short listing potential applicants and getting approval from higher authority in bidding phase, during which the request for quote is issued to the potential applicants. The bids are evaluated and the preferred bidder is selected and notified, after which the preferred bidder is called for final contract negotiation and the Project agreement is signed. The tentative procurement milestones are mentioned below.

Option No. 1

A. Implementation of whole Road section Kibaha – Morogoro Expressway

NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
1.	Preparation and Submission of Concept Note and Pre-Feasibility study to MoFP for approval	9-Aug-22	17-Sep-22	39		TANROADS	MoWT (W)	
2	Review and approval of the Concept Note and Pre-feasibility study by MoFP	18-Sep-22	02-October-22	14		MOFP	MOWT (W), TANROADS	
3.	Completion of TA Procurement	19-Aug-22	19-october-22	60		TANROADS	MoWT (W)	
4.	Submission of Inception report	20-Oct-22	4-November-22	14		TANROADS	MoWT (W)	
5.	Completion of Feasibility Study and tendering Documents.	05-November-22	O4-August-2023	274		TANROADS	MoWT (W)	
6.	Approval of Feasibility study and Tender documents	05-August-23	19-Aug-23	14		MOFP	MOWT (W), TANROADS	
7.	Advertisement of Request for Qualification (RFQ) and submission of tender documents	20-Aug-23	20-Sep-23	30		TANROADS	MoWT (W), MOFP	
8.	Evaluation for RFQ and shortlisting of Bidders	21-Sep-23	04-October-23	14		TANROADS	MoWT (W), MOFP	

NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
9.	Issuance of Request for Proposal (RFP) and Submission of Proposals	05 October -23	06-December-23	60		TANROADS	MoWT (W), MOFP	
11.	Evaluation and get preferred bidder	07-December-23	O6-January-24	14		TANROADS	MoWT (W), MOFP	
12	Preparation of Value for Money Report and Due diligence Report	07 janaury-24	21 - January 2024	14		TANROADS	MoWT (W), MOFP	
13	Approval of VfM & Due diligence reports by Steering Committee	22 January-24	06 February-24	14		TANROADS	MoWT (W), MOFP	
14	Intention for award of contract	07 Februay-24	12 February-24	5		TANROADS	MoWT (W), MOFP, AG	
15	Submission of draft PPP Agreement for Approval by Steering Committee	13 February-24	26 February - 24	14		TANROADS	MoWT (W), MOFP, AG	
16	Submission of draft PPP Agreement for vetting by AG	27 February-24	10 March-24	14		TANROADS	MoWT (W), MOFP, AG	
17.	Commercial Closure	11-March-24	18-March-24	7		TANROADS	MoWT (W), MOFP, AG	
18	Financial Close	19-March-24	18-June-24	90		TANROADS	MoWT (W), MOFP, AG	

Option No. 2

Implementing of Kibaha-Morogoro Expressway in two Lots (I & II): Lot No. I; Kibaha – Chalinze and Lot No. II; Chalinze – Morogoro Projects.

B. Lot No I; Kibaha - Chalinze

NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
1	Preparation and Submission of Concept Note and Pre-Feasibility study to MoFP for approval	9-Aug-22	17-Sep-22	39		TANROADS	MoWT (W)	
2	Review and approval of the Concept Note and Pre-feasibility study by MoFP	18-Sep-22	2-Oct-22	14		MOFP	MOWT (W), TANROADS	
3	Completion of TA Procurement	19-Aug-22	19-october-22	60		TANROADS	MoWT (W)	
4	Submission of Inception report	20-october-22	04-November-22	14		TANROADS	MoWT (W)	
5	Completion of Feasibility Study and tendering Documents.	05-November-22	04-Jan-23	60		TANROADS	MoWT (W)	
6	Approval of Feasibility study and Tender documents	05-Jan-23	19-Jan-23	14		MOFP	MOWT (W), TANROADS	
7	Advertisement of Request for Qualification (RFQ) and submission of tender documents	20-Jan-23	20-Feb-23	30		TANROADS	MoWT (W), MOFP	
8	Evaluation for RFQ and shortlisting of Bidders	21-Feb-23	05-Mar-23	14		TANROADS	MoWT (W), MOFP	
9	Issuance of Request for Proposal (RFP) and Submission of Proposals	06-Mar-23	05-May-23	60		TANROADS	MoWT (W), MOFP	
11	Evaluation and get preferred bidder	06-May-23	20-May-23	14		TANROADS	MoWT (W), MOFP	
12	Preparation of Value for Money Report and Due diligence Report	21-May-23	04 –Jun-2023	14		TANROADS	MoWT (W), MOFP	

NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
13	Approval of VfM & Due diligence reports by Steering Committee	05- Jun-23	19- Jun-23	14		TANROADS	MoWT (W), MOFP	
14	Intention for award of contract	20-Jun-23	25- Jun-23	5		TANROADS	MoWT (W), MOFP, AG	
15	Submission of draft PPP Agreement for Approval by Steering Committee	26-Jun-23	10-Jul- 23	14		TANROADS	MoWT (W), MOFP, AG	
16	Submission of draft PPP Agreement for vetting by AG	11-Jul-23	25-Jul-23	14		TANROADS	MoWT (W), MOFP, AG	
17	Commercial Closure	26-Jul-23	03-Aug-23	7		TANROADS	MoWT (W), MOFP, AG	
18	Financial Close	04-Aug-23	03-Nov-23	90		TANROADS	MoWT (W), MOFP, AG	

C. Lot No II; Chalinze – Morogoro

NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
1.	Preparation and Submission of Concept Note and Pre-Feasibility study to MoFP for approval	9-Aug-22	17-Sep-22	39		TANROADS	MoWT (W)	
2	Review and approval of the Concept Note and Pre-feasibility study by MoFP	18-Sep-22	02-October-22	14		MOFP	MOWT (W), TANROADS	
3.	Completion of TA Procurement	19-Aug-22	19-october-22	60		TANROADS	MoWT (W)	

NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
4.	Submission of Inception report	20-Oct-22	4-November-22	14		TANROADS	MoWT (W)	
5.	Completion of Feasibility Study and tendering Documents.	05-November-22	O4-August-2023	274		TANROADS	MoWT (W)	
6.	Approval of Feasibility study and Tender documents	05-August-23	19-Aug-23	14		MOFP	MOWT (W), TANROADS	
7.	Advertisement of Request for Qualification (RFQ) and submission of tender documents	20-Aug-23	20-Sep-23	30		TANROADS	MoWT (W), MOFP	
8.	Evaluation for RFQ and shortlisting of Bidders	21-Sep-23	04-October-23	14		TANROADS	MoWT (W), MOFP	
9.	Issuance of Request for Proposal (RFP) and Submission of Proposals	05 October -23	06-December-23	60		TANROADS	MoWT (W), MOFP	
11.	Evaluation and get preferred bidder	07-December-23	O6-January-24	14		TANROADS	MoWT (W), MOFP	
12	Preparation of Value for Money Report and Due diligence Report	07 janaury-24	21 - January 2024	14		TANROADS	MoWT (W), MOFP	
13	Approval of VfM & Due diligence reports by Steering Committee	22 January-24	06 February-24	14		TANROADS	MoWT (W), MOFP	

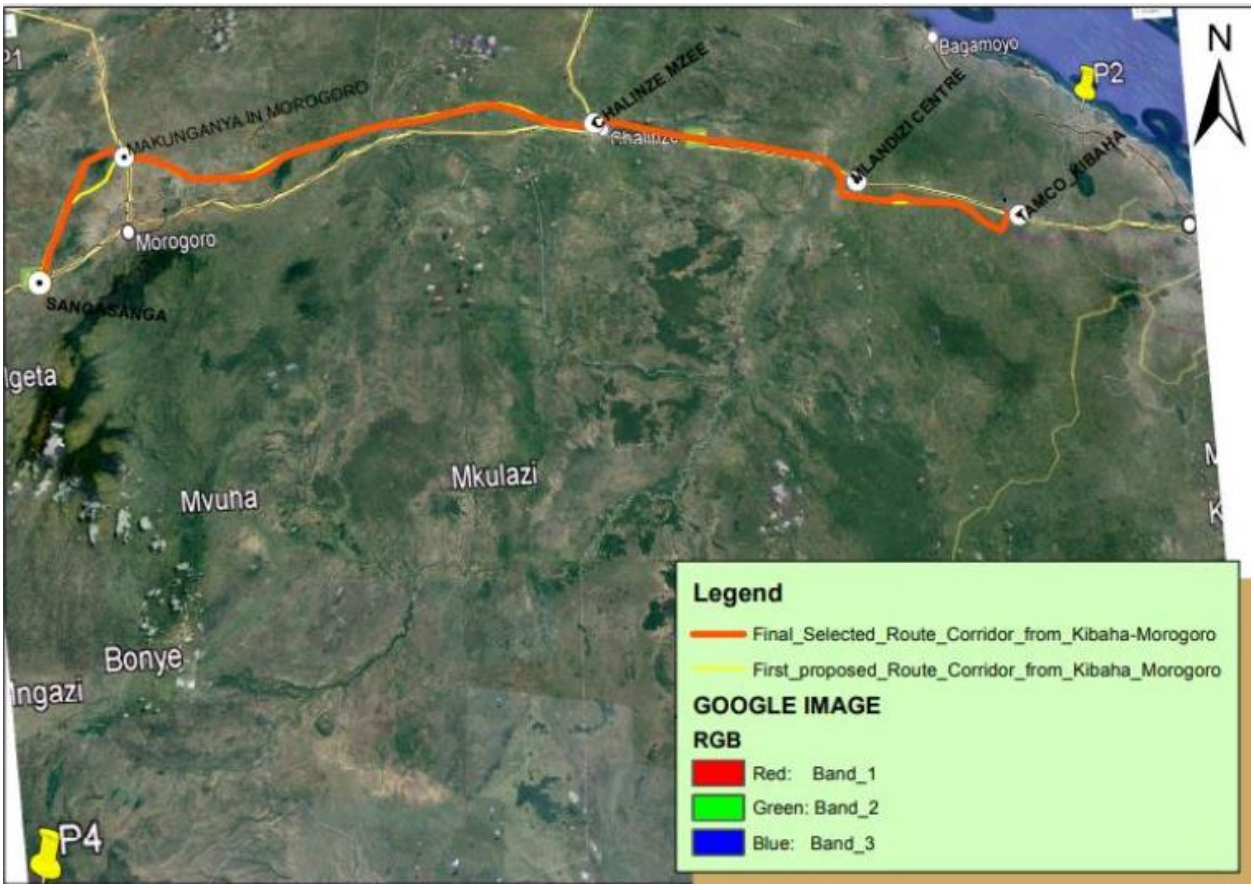
NO.	PLANNED ACTIVITIES/MILESTONES	DURATION		DAYS	COST TSHS (Mill)	RESPONSIBLE		REMARKS
		START	END			LEADER	OTHER STAKEHOLDERS	
14	Intention for award of contract	07 February-24	12 February-24	5		TANROADS	MoWT (W), MOFP, AG	
15	Submission of draft PPP Agreement for Approval by Steering Committee	13 February-24	26 February - 24	14		TANROADS	MoWT (W), MOFP, AG	
16	Submission of draft PPP Agreement for vetting by AG	27 February-24	10 March-24	14		TANROADS	MoWT (W), MOFP, AG	
17.	Commercial Closure	11-March-24	18-March-24	7		TANROADS	MoWT (W), MOFP, AG	
18	Financial Close	19-March-24	18-June-24	90		TANROADS	MoWT (W), MOFP, AG	

Annex A

Project Description

Project Title and Location

Proposed Construction and Operation of a Toll Road from Kibaha-Mlandizi-Chalinze to Morogoro Under Public Private Partnership (PPP). The project road is in Pwani and Morogoro Regions with a total length of about 205km. In Pwani Region the road starts from Kibaha to Chalinze and move along to Morogoro. The road alignment starts at an off-set of about 3km from existing Dar es salaam-Morogoro roads whereby it crosses the existing Morogoro Road and runs almost parallel on the northern side towards Chalinze up to Morogoro.



The overall objective of the project is to undertake construction and operation of a toll road from Kibaha to Morogoro under Public and Private Partnership (PPP). The purpose of the project is to consider the viability of a toll road between Dar Es Salaam and Morogoro and to propose the best options for proceeding with the Project. The need and

justification for the project has been prompted by the fact that currently the travel time between Dar Es Salaam and Chalinze is highly affected by increasing traffic congestion, which hinders the socio-economic development of the country. The intention is to make the proposed project road to be a toll road, whereby road users will be charged for the use of the road. The proposed project road shall be constructed separately from the existing road to allow local traffic and the road users who may not be willing to pay road toll to continue using the existing road.

The planned road design features for the Toll Road are proposed to be comprised of the following:

Bridge of more than 100m (1 Nos.), Bridges of less than 100m (15Nos.), Box culverts (115 Nos.), Major rest areas between Kibaha and Morogoro(205km) and Truck Parking Area at Kwala between Kibaha-Chalinzei (85km) and at Mdaula between Chalinze and Morogoro (120km) and Main Line Toll Plaza at Kibaha, Chalinze and Morogoro.

Annex B

Conceptual Design and Project Cost Estimates

The concept covers the aim of maximizing the quality of the “road infrastructure” while still meeting the practical requirements of the facility to achieve the most effective road transport solution. Persistent effort was made to achieve a balance between optimal functional use, aesthetics, and quality of road facility. The existing road will facilitate entrance and exit to from the towns and be used as an alternative route to the toll road hence meeting the requirements of the PPP Act and its regulations.

To meet the required needs, the project will have the following features

i. Four lane carriageway with 205 km length
ii. Eight entry/exit
iii. Three major Reinforced Concrete bridges
iv. Eight overpasses
v. Six Interchange
vi. Rest areas at the entry/exit
vii. Eight pay plaza
viii. Underpass at all existing small roads and at Ruvu Ranch
ix. Control Centre

Project Costs

The total project cost has been estimated to be about Tanzania Shillings (Tshs) **1,972,679,106,563.9** or United States Dollars (USD) **857,686,568.07**. The major cost components include construction works; environmental management & resettlement issue; operation & maintenance; design; and supervision work. The details on the cost items for this project are summarized below.

	COST ESTIMATES FOR ALL OPTION 4 LANE85/120KM/205KM ZS			
COST ESTIMATES	ACTIVITIES	COST FOR KIBAHA-CHALINE-85KM	COST FOR CHALINZE - MORO-120KM	COST FOR KIBAHA - MORO-205KM
	EARTHWORKS	118,035,071,213.2	233,292,846,633.1	351,327,917,846.3
	PAVEMENTS	154,991,115,037.3	298,378,617,184.0	453,369,732,221.3
	MAJOR STRACTURES	72,376,499,755.0	132,345,599,552.0	204,722,099,307.0
	MINOR STRUCTURES	27,967,982,262.5	54,337,794,110.0	82,305,776,372.5
	ANCILLIARY ROAD WOF	15,244,701,927.0	23,230,021,984.0	38,474,723,911.0
	GENERAL ITEM	32,870,120,125.0	67,055,045,055.0	99,925,165,180.0
	Subtotal 0	421,485,490,320.0	808,639,924,518.2	1,230,125,414,838.1
	DAY WORK 2.5%	10,537,137,258.0	20,215,998,113.0	30,753,135,371.0
			-	
	CONTINGENCIES-6%	25,289,129,419.2	48,518,395,471.1	73,807,524,890.3
	Sub total-1	457,311,756,997.2	877,374,318,102.2	1,334,686,075,099.4
			-	-
OMC	OPERATIONS AND MAINTANCE COST-42%	192,070,937,938.8	368,497,213,602.9	560,568,151,541.7
EMP AND RAP COST	land,buldinds and trees	20,340,053,068.0	14,734,706,854.4	35,074,759,922.4
	Relocation and restoration of	175,000,000.8	175,000,000.8	350,000,001.5
	Other environmental c	370,000,000.0	370,000,000.0	740,000,000.0
	Sub total -2	212,955,991,007.6	383,776,920,458.1	194,453,925.0
	Supervision Cost	12,999,483,245.0	24,087,277,777.5	37,086,761,022.5
	Design Cost	12,318,453,151.3	27,825,211,824.0	40,143,664,975.3
	Other		-	-
			-	-
			-	-
	TOTAL COST	1,117,071,174,720.9	2,121,703,652,680.0	1,972,679,106,563.9

Project Costs

The total project cost has been estimated to be about Tanzania Shillings (Tshs) **1,972,679,106,563.9** or United States Dollars (USD) **857,686,568.07**. The major cost components include construction works; environmental management & resettlement issue; operation & maintenance; design; and supervision work. The details on the cost items for this project are summarized below.

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COST ESTIMATES	ACTIVITIES	COST FOR KIBAHA-CHALINE-85KM	COST FOR CHALINZE - MORO-120KM	COST FOR KIBAHA - MORO-205KM
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	PAVEMENTS	154,991,115,037.3	298,378,617,184.0	453,369,732,221.3
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	GENERAL ITEM	32,870,120,125.0	67,055,045,055.0	99,925,165,180.0
	Subtotal 0	**421,485,490,320.0**	**808,639,924,518.2**	**1,230,125,414,838.1**
	DAY WORK 2.5%	10,537,137,258.0	20,215,998,113.0	30,753,135,371.0
			-	
	CONTINGENCIES-6%	**25,289,129,419.2**	48,518,395,471.1	**73,807,524,890.3**
	Sub total-1	**457,311,756,997.2**	**877,374,318,102.2**	**1,334,686,075,099.4**
			-	-
OMC	OPERATIONS AND MAINTANCE COST-42%	192,070,937,938.8	368,497,213,602.9	560,568,151,541.7
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	Relocation and restoration of	175,000,000.8	175,000,000.8	350,000,001.5
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	Sub total -2	212,955,991,007.6	383,776,920,458.1	**194,453,925.0**
	Supervision Cost	12,999,483,245.0	24,087,277,777.5	37,086,761,022.5
	Design Cost	12,318,453,151.3	27,825,211,824.0	40,143,664,975.3
	Other		-	-
			-	-
			-	-
	TOTAL COST	**1,117,071,174,720.9**	2,121,703,652,680.0	**1,972,679,106,563.9**

Annex C

Willingness to Pay Survey

The traffic congestion problem in some of cities and townships the prompted the need to be addressed with immediate effect. This is due to the fact that traffic congestion increases Vehicle Operations Costs (VOC) and Vehicle Travelling Time. According to the study made by TANROADS along Kibaha-Morogoro road considering heavy trucks travelling at speeds ranging from 10km/hr to 120km/hr, it was noted that for the speed below 100 km/hr, the VOC increase as a speed decreases. However, for the speed above 100 km/hr the VOC is increasing at decreasing rate and time is saved. Furthermore, for the highway with operation speed of 100km/hr travel time is about 2hrs. However, following the current condition and congestion of the Kibaha – Morogoro highway, travelling time is around 4hrs.

The current improvement of Kimara-Kibaha road (19.7 km) to 8 lanes significantly shifted traffic congestion to Kibaha – Chalinze Road. Consequently, the congestion problem is causing the delays on transportation of agricultural goods and industrial produce to reach their destinations in time, increase and unpredictable price of goods, denial of general public to access social services in time. Also, the slowly moving trucks effects social-economic activities of the people residing near the congested road and general public at large who's their day-to-day earning are directly linked to the performance of these roads.

In order to determine the toll rate of toll road, the surveyed of the "Willingness to Pay (WTP)" for potential road users in the future. The "Willingness to Pay (WTP)" of the drivers was surveyed as one of the items of OD and SP survey. After giving information such as project line map, travel distance, and travel time to drivers, we asked how much they could pay to use the project road.

Based on the previous study on Dar es salaam –kibaha – Chainze section which involved drivers totaling of 976 persons, of which 254 Person were passenger cars (including pickups), 169 bus drivers, 237 truck drivers and 358 trailer drivers. As results of the survey, the average amount of WTP for passenger car drivers was TZS 7,518, for bus drivers TZS 16,427, for truck and trailer drivers TZS 20,751 and TZS 27,708 respectively.

Table1: Willingness to Pay survey results. Refer to Annex for the results of the SP survey.

Classification	Auto	Bus	Truck Trailer
Willingness to	7,51	16,4	20,7	27,7
Ratio (Auto=1.0)	1.	2.	2.	3.

In general, the results of SP survey for WTP may be somewhat higher than the actual drivers' payable amount, but it may be useful to refer to the ratio of the amount that the different drivers are willing to pay.

Table 2: SURVEY FORM (sample)

A TOLL ROAD FROM KIBAHA-CHALINZE-MOROGORO **Stated preference Survey**

Date:	**Reference (Vehicle Reg):**
Location:	**Survey Sheet No**.:
Survey:	**Supervisor**:

1. What is your Origin and Destination

Origin	Destination
Regional:	Regional:
District:	District:
Zone	Zone

2. What is your Transportation?

1.Car	2.Utility Vehicle	3. Two Wheeled	4.Bus (≤25)	5.Bus (≥25)	( )
6.Light Truck	7.Medium Truck	Heavy Truck	Articulated Truck	Others	

3. Tell us estimated travel time for arriving at your destination ( )hours.

4. Please answer the following for each item

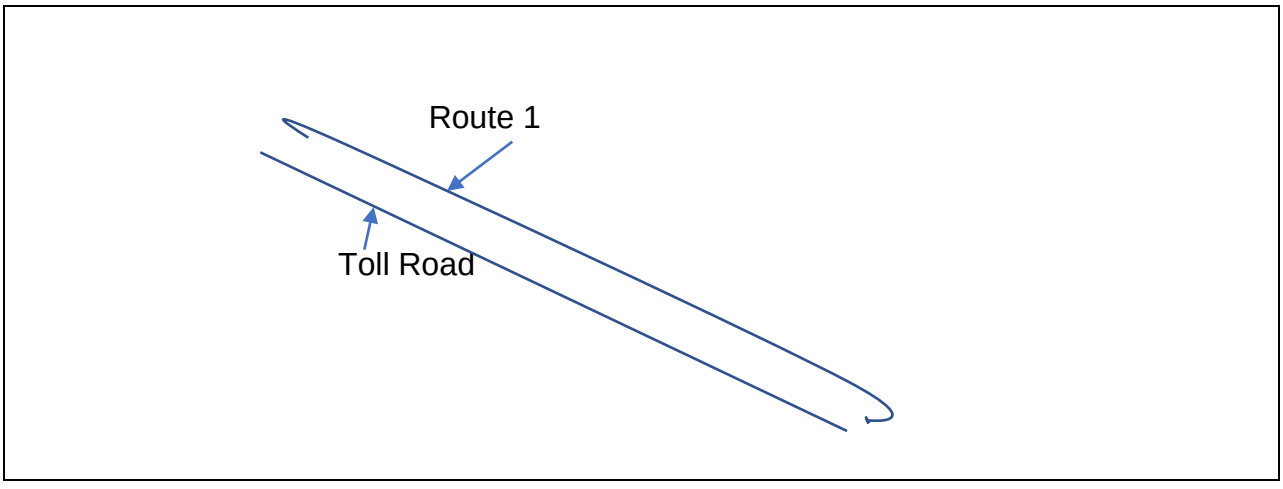
4.1 Alternative Route 1

Toll road drive time saving is as follows;

If you use the toll road, how much do you pay maximum toll road (Fee or Rate)

Table 3:

Road	**Travel time (Minutes)**				**Select Maximum Toll (TZS)**		
	Car	**Bus**	**Truck**		**Car**	**Bus**	**Truck**
Route 1	180	224	199		5000	20,000	20,000
Route 2 (Toll Road)	105	125	113		5,500	21,000	21,000
Decreasing	▼75	▼ 99	▼ 86		6,000	22,000	22,000
					6,500	23,000	23,000
					7,000	24,000	24,000



Toll estimation

According to the TANROAD's report "Consultancy Services for Preparation of the concept report to Establish toll roads in Tanzania through PPP Arrangements, 2011", it is proposed to set the toll rate at a half (ranged in 50~60% by vehicle type) of the Road User Cost Savings in terms of vehicle operating cost. For this project, above suggestion is applied to estimate the optimal toll rate as per following steps:

- Calculate the travel time and speed of existing road and the project road (Toll road)
  - Calculate the travel time cost and vehicle operating cost for the existing road and the project road (toll road)
  - Calculate the savings of travel cost (Travel time cost+ operating cost) using toll road
  - Set 50% of the road user cost savings as base toll rate.

The travel cost are estimated for both of existing route (Morogoro road - Chalinze ~ Kibamba) and the project route, and the corresponding toll rates are estimated for the project route

- Time cost is estimated by applying the value of time to the travel time
- Operation cost estimate is based on the operating cost by vehicle types and travel speed from "Guidelines for Pre-feasibility Study on Road and Railway Projects, South Korea" and applying fuel cost in Tanzania.

Table: The Travel Cost Saving Of Passenger Vehicle

Classification	Auto			Bus
	Base Road		Project Road	Base Road
Distance (km)				
Travel Time (min)	138.	61.	151.	86.7
Travel Time Cost	13,303	5,88	95,014	54,449
Operating Cost	26,638	19,825	43,529	32,312

Total Travel Cost	39,941	25,711	138,542	86,761
Saving Travel Cost	14,23		51,781	
Appropriate tolls	7,11		25,891	
Toll Rates	82.0(=		298.5(=300	

The vehicle classifications for buses are subdivided into small and large buses by applying the midblock traffic survey results

Table: The travel cost saving of Buses

	Bus			
Classification	**Auto**			**Remarks**
Draft Final				
Ratio of vehicle type	-	51.1%	48.9%	Midblock (Kibamba, Zakhem, Visinga)
Final report	8	200	400	Average toll rates of small and large bus is

Table 9.5-9 The toll rate of passenger vehicle

For goods vehicle, the toll rates derived from “WTP” survey and foreign case studies are set 3 times of auto toll rate in the Draft Final report

- Willingness to Pay survey result: 2.8 times of auto users’ WTP
- South Africa “N1” road: 3.1 times of auto toll rate

Annex D: Community Engagement

Annex E: Environmental Due diligence &

Annex F: Social Due diligence; appended separately.

Annex G - I: Projected Income Statement (RIGID – 4-Lanes Expressway)

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods		31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27	30-Jun-28
Flags											
Income		-	-	-	-	-	-	-	0	8	2
Traffic Revenue	-	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	68.38	-	-	-	-	-	-	-	0.00	5.44	0.00
Rental Income	189.59	-	-	-	-	-	-	-	-	2.40	2.40
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Costs		-	-	-	-	-	-	-	-	-	-
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-
	-										
Operating Profit/(Loss)		-	-	-	-	-	-	-	0.00	7.84	2.40
Finance Revenue		-	2.49	3.11	5.78	13.02	30.81	53.43	76.63	87.85	88.47
Loan Receivable income recognised	4,175.63	-	2.49	3.11	5.78	13.02	30.81	53.43	76.63	87.54	88.17
Interest Income	12.89	-	-	-	-	-	-	-	-	0.31	0.31
Finance Cost		(0.95)	(1.37)	(2.03)	(3.86)	(9.44)	(19.11)	(30.43)	(38.20)	(53.49)	(52.47)
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(1,422.59)	(0.95)	(1.37)	(2.03)	(3.86)	(9.44)	(19.11)	(30.43)	(38.20)	(53.49)	(52.47)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-	-
Interest Capitalised	-										
Net Income before Tax and Amortisation		(0.95)	1.12	1.09	1.92	3.58	11.70	22.99	38.44	42.21	38.40
Amortisation											
Net Income before Tax		(0.95)	1.12	1.09	1.92	3.58	11.70	22.99	38.44	42.21	38.40
Taxation		0.28	(0.33)	(0.33)	(0.58)	(1.07)	(3.51)	(6.90)	(11.53)	(12.66)	(11.52)
Normal Tax	(929.91)	-	-	-	-	-	-	-	(0.00)	(1.80)	(0.47)
Deferred Tax	(0.07)	0.28	(0.33)	(0.33)	(0.58)	(1.07)	(3.51)	(6.90)	(11.53)	(10.86)	(11.05)
Dividend Tax	-										
Net Income after Tax		(0.66)	0.78	0.76	1.35	2.51	8.19	16.09	26.91	29.55	26.88
Dividends		-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(18.09)	(19.90)
Ordinary Shareholders	(2,326.10)	-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(18.09)	(19.90)
	-										
Retained Income for the Year		(0.66)	0.66	0.36	1.27	2.43	8.12	16.02	26.83	11.46	6.98
Opening Retained Income		-	(0.66)	-	0.36	1.63	4.06	12.18	28.20	55.03	66.49
Closing Retained Income		(0.66)	-	0.36	1.63	4.06	12.18	28.20	55.03	66.49	73.48
Equity Calculation Reserve		(0.66)	0.12	0.76	1.70	4.14	12.25	28.27	55.11	84.58	93.37

Annex G - I: Projected Income Statement (RIGID – 4-Lanes Expressway) - Continue

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-28	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags											
Income	**8**	**2**	**8**	**3**	**8**	**3**	**8**	**3**	**7**	**3**	**7**
Traffic Revenue	-	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	5.27	0.00	5.10	(0.00)	4.93	(0.00)	4.75	(0.00)	4.57	(0.00)	4.38
Rental Income	2.49	2.49	2.58	2.58	2.67	2.67	2.77	2.77	2.87	2.87	2.97
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Costs	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-
Operating Profit/(Loss)	**7.76**	**2.49**	**7.68**	**2.58**	**7.60**	**2.67**	**7.52**	**2.77**	**7.44**	**2.87**	**7.35**
Finance Revenue	**89.15**	**89.71**	**90.33**	**90.84**	**91.39**	**91.81**	**92.28**	**92.67**	**93.11**	**93.41**	**93.75**
Loan Receivable income recognised	88.84	89.41	90.03	90.54	91.08	91.51	91.98	92.37	92.80	93.09	93.41
Interest Income	0.31	0.30	0.31	0.30	0.30	0.30	0.30	0.30	0.31	0.32	0.34
Finance Cost	**(52.11)**	**(50.77)**	**(50.63)**	**(49.27)**	**(49.06)**	**(47.67)**	**(47.39)**	**(46.22)**	**(45.61)**	**(44.14)**	**(43.69)**
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(52.11)	(50.77)	(50.63)	(49.27)	(49.06)	(47.67)	(47.39)	(46.22)	(45.61)	(44.14)	(43.69)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-	-
Interest Capitalised											
Net Income before Tax and Amortisation	**44.80**	**41.43**	**47.38**	**44.14**	**49.92**	**46.81**	**52.41**	**49.22**	**54.93**	**52.14**	**57.41**
Amortisation											
Net Income before Tax	**44.80**	**41.43**	**47.38**	**44.14**	**49.92**	**46.81**	**52.41**	**49.22**	**54.93**	**52.14**	**57.41**
Taxation	**(13.44)**	**(12.43)**	**(14.21)**	**(13.24)**	**(14.98)**	**(14.04)**	**(15.72)**	**(14.77)**	**(16.48)**	**(15.64)**	**(17.22)**
Normal Tax	(2.79)	(1.61)	(3.83)	(2.70)	(4.91)	(3.84)	(5.80)	(4.72)	(6.97)	(6.05)	(8.21)
Deferred Tax	(10.65)	(10.82)	(10.39)	(10.54)	(10.07)	(10.20)	(9.93)	(10.04)	(9.51)	(9.60)	(9.01)
Dividend Tax											
Net Income after Tax	**31.36**	**29.00**	**33.17**	**30.90**	**34.95**	**32.77**	**36.69**	**34.45**	**38.45**	**36.50**	**40.19**
Dividends	**(19.67)**	**(21.33)**	**(21.26)**	**(22.84)**	**(22.85)**	**(24.36)**	**(23.89)**	**(23.65)**	**(21.96)**	**(23.33)**	**(23.56)**
Ordinary Shareholders	(19.67)	(21.33)	(21.26)	(22.84)	(22.85)	(24.36)	(23.89)	(23.65)	(21.96)	(23.33)	(23.56)
Retained Income for the Year	**11.69**	**7.67**	**11.91**	**8.06**	**12.10**	**8.41**	**12.80**	**10.81**	**16.49**	**13.17**	**16.63**
Opening Retained Income	**73.48**	**85.16**	**92.84**	**104.74**	**112.80**	**124.90**	**133.30**	**146.11**	**156.91**	**173.41**	**186.57**
Closing Retained Income	**85.16**	**92.84**	**104.74**	**112.80**	**124.90**	**133.30**	**146.11**	**156.91**	**173.41**	**186.57**	**203.20**

Annex G - II: Projected Cash Flow Statement (RIGID – 4-Lanes Expressway)

Toll Road PPP Project: Kibaha to Morogoro
PPP Cash Flow Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27
Flags								
Financial Period	1	1	2	2	3	3	4	4
Concession Periods (Half Years)	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6
Development/ Construction Period	1	1	1	1	1	1	1	1
Service Period	0	0	0	0	0	0	0	0
Operating Activities								
Profit Before Tax	(0.95)	1.12	1.09	1.92	3.58	11.70	22.99	38.44
Adjustment to reconcile PBT to net cash flows								
Non-cash:								
Interest Income (Loan Receivable income recognised)	-	(2.49)	(3.11)	(5.78)	(13.02)	(30.81)	(53.43)	(76.63)
Interest Expense	0.95	1.37	2.03	3.86	9.44	19.11	30.43	38.20
Amortisation	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	-	-	-	-	-	-	-	(0.00)
Movements in Working Capital								
(Increase) in Accounts Receivable	-	-	-	-	-	-	-	(61.88)
Increase in Accounts Payable								
Interest Paid on Senior Debt T1	-	-	-	-	-	-	-	-
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-
Taxation Paid	-	-	-	-	-	-	-	(0.00)
Vat Paid								
Dividends Paid	-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Net Cash Generated from Operations	**-**	**(0.12)**	**(0.40)**	**(0.07)**	**(0.07)**	**(0.07)**	**(0.07)**	**(61.95)**
Investment Activities								
Capital Cost - ICW	(0.20)	(0.57)	(27.65)	(87.08)	(223.38)	(271.63)	(257.44)	(67.61)
Facility Cost - ICW	(14.47)	(1.94)	(1.92)	(1.78)	(1.49)	(0.96)	(0.45)	(0.13)
Concessionaire Costs - At Financial Close	(15.61)	-	-	-	-	-	-	-
Concessionaire Costs - During Development	(3.50)	(3.50)	(3.57)	(3.57)	(3.64)	(3.64)	(3.71)	(3.71)
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-
Finance Assets Repaid	-	-	-	-	-	-	-	-
Net Cash Utilised in Investing Activities	**(33.78)**	**(6.00)**	**(33.14)**	**(92.42)**	**(228.50)**	**(276.22)**	**(261.60)**	**(71.45)**
Cash Raised from Financing Activities								
Government Contribution	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	26.71	4.75	25.97	72.33	178.75	216.06	204.63	104.32
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-
Share Capital	7.45	1.32	7.24	20.16	49.83	60.23	57.04	29.08
Net Cash Raised from Financing Activities	**34.16**	**6.07**	**33.21**	**92.49**	**228.57**	**276.30**	**261.67**	**133.40**
Changes in Cash Position	**0.38**	**(0.05)**	**(0.33)**	**-**	**-**	**-**	**-**	**-**
Cash at the Beginning of Year	**-**	**0.38**	**0.33**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**
Cash at End of Year	**0.38**	**0.33**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**

Annex G - II: Projected Cash Flow Statement (RIGID – 4-Lanes Expressway) - Continue

Toll Road PPP Project: Kibaha to Morogoro
PPP Cash Flow Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-27	30-Jun-28	31-Dec-28	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags													
Financial Period	5	5	6	6	7	7	8	8	9	9	10	10	11
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1	1	1	1	1
Operating Activities													
Profit Before Tax	42.21	38.40	44.80	41.43	47.38	44.14	49.92	46.81	52.41	49.22	54.93	52.14	57.41
Adjustment to reconcile PBT to net cash flows													
Non-cash:													
Interest Income (Loan Receivable income recognised)	(87.54)	(88.17)	(88.84)	(89.41)	(90.03)	(90.54)	(91.08)	(91.51)	(91.98)	(92.37)	(92.80)	(93.09)	(93.41)
Interest Expense	53.49	52.47	52.11	50.77	50.63	49.27	49.06	47.67	47.39	46.22	45.61	44.14	43.69
Amortisation	-	-	-	-	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	(5.44)	(0.00)	(5.27)	(0.00)	(5.10)	0.00	(4.93)	0.00	(4.75)	0.00	(4.57)	0.00	(4.38)
Movements in Working Capital													
(Increase) in Accounts Receivable	-	0.49	-	0.48	-	0.47	-	0.46	-	(1.31)	(3.51)	(3.08)	(3.51)
Increase in Accounts Payable													
Interest Paid on Senior Debt T1	(53.49)	(52.47)	(52.11)	(50.77)	(50.63)	(49.27)	(49.06)	(47.67)	(47.39)	(46.22)	(45.61)	(44.14)	(43.69)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Paid	(1.80)	(0.47)	(2.79)	(1.61)	(3.83)	(2.70)	(4.91)	(3.84)	(5.80)	(4.72)	(6.97)	(6.05)	(8.21)
Vat Paid													
Dividends Paid	(18.09)	(19.90)	(19.67)	(21.33)	(21.26)	(22.84)	(22.85)	(24.36)	(23.89)	(23.65)	(21.96)	(23.33)	(23.56)
Net Cash Generated from Operations	**(70.66)**	**(69.65)**	**(71.78)**	**(70.44)**	**(72.84)**	**(71.47)**	**(73.85)**	**(72.45)**	**(74.01)**	**(72.83)**	**(74.88)**	**(73.41)**	**(75.66)**
Investment Activities													
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	(1.97)	(1.97)	(2.03)	(2.03)	(2.10)	(2.10)	(2.16)	(2.16)	(2.23)	(2.23)	(2.30)	(2.30)	(2.37)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	(1.42)	(1.42)	(1.46)	(1.46)	(1.51)	(1.51)	(1.56)	(1.56)	(2.41)	(2.41)	(2.48)	(2.48)	(2.56)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	82.44	82.44	84.55	84.55	86.72	86.72	88.94	88.94	91.24	91.24	93.60	93.60	96.02
Net Cash Utilised in Investing Activities	**79.05**	**79.05**	**81.05**	**81.05**	**83.11**	**83.11**	**85.23**	**85.23**	**86.61**	**86.61**	**88.81**	**88.81**	**91.08**

Annex G - III: Projected Balance Sheet Statement (RIGID – 4-Lanes Expressway)

Toll Road PPP Project:
PPP Balance Sheet
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27	30-Jun-28	31-Dec-28	30-Jun-29	31-Dec-29
Flags													
Assets													
Non current Assets													
Other Financial Assets	**33.78**	**42.27**	**78.52**	**176.73**	**418.25**	**725.28**	**1,040.31**	**1,188.39**	**1,196.88**	**1,206.00**	**1,213.78**	**1,222.14**	**1,229.05**
Opening Balance	-	33.78	42.27	78.52	176.73	418.25	725.28	1,040.31	1,188.39	1,196.88	1,206.00	1,213.78	1,222.14
Advances	33.78	6.00	33.14	92.42	228.50	276.22	261.60	71.45	3.39	3.39	3.49	3.49	3.60
Repayment	-	2.49	3.11	5.78	13.02	30.81	53.43	76.63	5.10	5.73	4.29	4.86	3.31
Closing Balance	33.78	42.27	78.52	176.73	418.25	725.28	1,040.31	1,188.39	1,196.88	1,206.00	1,213.78	1,222.14	1,229.05
Current Assets	**0.38**	**0.33**	**-**	**-**	**-**	**-**	**-**	**61.88**	**61.88**	**61.39**	**61.39**	**60.91**	**60.91**
MRA	-	-	-	-	-	-	-	-	-	-	-	-	-
DSRA - Senior Debt Tranche 1	-	-	-	-	-	-	-	61.88	61.88	61.39	61.39	60.91	60.91
DSRA - Senior Debt Tranche 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Cash	0.38	0.33	-	-	-	-	-	-	-	-	-	-	-
VAT Control Account													
Total Assets	**34.16**	**42.60**	**78.52**	**176.73**	**418.25**	**725.28**	**1,040.31**	**1,250.27**	**1,258.76**	**1,267.38**	**1,275.17**	**1,283.05**	**1,289.96**
Equity and Liabilities													
Equity Capital	**7.45**	**8.77**	**16.01**	**36.17**	**86.00**	**146.23**	**203.28**	**232.36**	**232.36**	**232.36**	**232.36**	**232.36**	**232.36**
Subordinated Shareholder Loans	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Retained Income	**(0.66)**	**-**	**0.36**	**1.63**	**4.06**	**12.18**	**28.20**	**55.03**	**66.49**	**73.48**	**85.16**	**92.84**	**104.74**
Current	(0.66)	0.66	0.36	1.27	2.43	8.12	16.02	26.83	11.46	6.98	11.69	7.67	11.91
Prior	-	(0.66)	-	0.36	1.63	4.06	12.18	28.20	55.03	66.49	73.48	85.16	92.84
Total Equity	**6.78**	**8.77**	**16.37**	**37.80**	**90.07**	**158.41**	**231.48**	**287.39**	**298.85**	**305.83**	**317.52**	**325.19**	**337.10**
Non Current Liabilities	**27.38**	**33.83**	**62.16**	**138.92**	**328.18**	**566.87**	**808.83**	**962.88**	**959.91**	**961.55**	**957.65**	**957.86**	**952.86**
Senior Debt - Tranche 1	27.66	33.78	61.78	137.97	326.16	561.33	796.40	938.91	925.08	915.68	901.12	890.51	875.13
Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Mezz Debt	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred Tax Liability	(0.28)	0.05	0.38	0.95	2.03	5.54	12.43	23.97	34.83	45.87	56.52	67.34	77.73
Current Liabilities	**-**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Bank Overdraft	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAT Control Account													
Total Liabilities	**27.38**	**33.83**	**62.16**	**138.92**	**328.18**	**566.87**	**808.83**	**962.88**	**959.91**	**961.55**	**957.65**	**957.86**	**952.86**
Total Liabilities and Equity	**34.16**	**42.60**	**78.52**	**176.73**	**418.25**	**725.28**	**1,040.31**	**1,250.27**	**1,258.76**	**1,267.38**	**1,275.17**	**1,283.05**	**1,289.96**

Annex G - III: Projected Balance Sheet Statement (RIGID – 4-Lanes Expressway) Continue…

Toll Road PPP Project: Kibaha to PPP Balance Sheet Currency & Unit = USD Millions									
Semi-Annual Periods	**31-Dec-29**	**30-Jun-30**	**31-Dec-30**	**30-Jun-31**	**31-Dec-31**	**30-Jun-32**	**31-Dec-32**	**30-Jun-33**	**31-Dec-33**
Flags									
Financial Period	7	7	8	8	9	9	10	10	11
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1
Concession Commencement Start	0	0	0	0	0	0	0	0	0
Concession Commencement End	0	0	0	0	0	0	0	0	0
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1
Assets									
Non current Assets									
Other Financial Assets	**833.43**	**837.72**	**840.99**	**844.49**	**847.39**	**850.51**	**852.45**	**854.53**	**855.33**
Opening Balance	829.42	833.43	837.72	840.99	844.49	847.39	850.51	852.45	854.53
Advances	2.40	2.40	2.48	2.48	3.09	3.09	3.19	3.19	3.29
Repayment	1.61	1.89	0.79	1.02	(0.19)	0.02	(1.25)	(1.11)	(2.49)
Closing Balance	833.43	837.72	840.99	844.49	847.39	850.51	852.45	854.53	855.33
Current Assets	**40.34**	**40.10**	**40.10**	**39.88**	**39.88**	**40.82**	**43.17**	**45.29**	**47.64**
MRA	-	-	-	-	-	1.17	3.51	5.86	8.20
DSRA - Senior Debt Tranche 1	40.34	40.10	40.10	39.88	39.88	39.65	39.65	39.44	39.44
DSRA - Senior Debt Tranche 2	-	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-	-
VAT Control Account									
Total Assets	**873.76**	**877.83**	**881.09**	**884.36**	**887.27**	**891.33**	**895.62**	**899.82**	**902.97**
Equity and Liabilities									
Equity Capital	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**
Subordinated Shareholder Loans	-	-	-	-	-	-	-	-	-
Retained Income	**65.86**	**71.26**	**78.49**	**84.14**	**91.89**	**99.14**	**109.40**	**118.24**	**128.64**
Current	7.07	5.40	7.24	5.64	7.75	7.26	10.26	8.84	10.40
Prior	58.79	65.86	71.26	78.49	84.14	91.89	99.14	109.40	118.24
Total Equity	**224.32**	**229.72**	**236.95**	**242.60**	**250.35**	**257.60**	**267.86**	**276.70**	**287.10**
Non Current Liabilities	**649.45**	**648.11**	**644.14**	**641.77**	**636.92**	**633.73**	**627.75**	**623.12**	**615.86**
Senior Debt - Tranche 1	598.23	589.92	579.29	570.19	558.79	548.98	536.75	525.81	512.63
Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-
Mezz Debt	-	-	-	-	-	-	-	-	-
Deferred Tax Liability	51.22	58.19	64.85	71.58	78.13	84.74	91.01	97.31	103.23
Current Liabilities	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Bank Overdraft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAT Control Account									
Total Liabilities	**649.45**	**648.11**	**644.14**	**641.77**	**636.92**	**633.73**	**627.75**	**623.12**	**615.86**
Total Liabilities and Equity	**873.76**	**877.83**	**881.09**	**884.36**	**887.27**	**891.33**	**895.62**	**899.82**	**902.97**

Annex G - IV: Projected Income Statement (RIGID – 6-Lanes Expressway)

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods		31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27	30-Jun-28
Flags											
Income		-	-	-	-	-	-	-	0.00	5.12	2.40
Traffic Revenue	-	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	34.19	-	-	-	-	-	-	-	0.00	2.72	(0.00)
Rental Income	189.59	-	-	-	-	-	-	-	-	2.40	2.40
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Costs		-	-	-	-	-	-	-	-	-	-
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-
	-										
Operating Profit/(Loss)		-	-	-	-	-	-	-	0.00	5.12	2.40
Finance Revenue		-	2.07	2.59	4.44	9.24	20.85	35.57	50.64	57.94	58.30
Loan Receivable income recognised	2,703.28	-	2.07	2.59	4.44	9.24	20.85	35.57	50.64	57.74	58.10
Interest Income	8.61	-	-	-	-	-	-	-	-	0.20	0.20
Finance Cost		(0.82)	(1.18)	(1.68)	(2.96)	(6.74)	(13.24)	(20.87)	(26.10)	(34.75)	(34.07)
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(929.60)	(0.82)	(1.18)	(1.68)	(2.96)	(6.74)	(13.24)	(20.87)	(26.10)	(34.75)	(34.07)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-	-
Interest Capitalised	-										
Net Income before Tax and Amortisation		(0.82)	0.89	0.91	1.48	2.50	7.61	14.70	24.53	28.31	26.63
Amortisation											
Net Income before Tax		(0.82)	0.89	0.91	1.48	2.50	7.61	14.70	24.53	28.31	26.63
Taxation		0.24	(0.27)	(0.27)	(0.45)	(0.75)	(2.28)	(4.41)	(7.36)	(8.49)	(7.99)
Normal Tax	(616.98)	-	-	-	-	-	-	-	(0.00)	(1.27)	(0.66)
Deferred Tax	(0.06)	0.24	(0.27)	(0.27)	(0.45)	(0.75)	(2.28)	(4.41)	(7.36)	(7.22)	(7.33)
Dividend Tax	-										
Net Income after Tax		(0.57)	0.62	0.64	1.04	1.75	5.33	10.29	17.17	19.82	18.64
Dividends		-	(0.05)	(0.47)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(13.11)	(13.97)
Ordinary Shareholders	(1,547.37)	-	(0.05)	(0.47)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(13.11)	(13.97)
	-										
Retained Income for the Year		(0.57)	0.57	0.17	0.97	1.67	5.25	10.22	17.10	6.70	4.68
Opening Retained Income		-	(0.57)	-	0.17	1.14	2.81	8.07	18.28	35.38	42.08
Closing Retained Income		(0.57)	-	0.17	1.14	2.81	8.07	18.28	35.38	42.08	46.76

Annex G - IV: Projected Income Statement (RIGID – 6-Lanes Expressway) - Continue

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-28	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags											
Income	**5.13**	**2.49**	**5.13**	**2.58**	**5.14**	**2.67**	**5.14**	**2.77**	**5.15**	**2.87**	**5.16**
Traffic Revenue	-	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	2.64	(0.00)	2.55	-	2.47	-	2.38	0.00	2.28	(0.00)	2.19
Rental Income	2.49	2.49	2.58	2.58	2.67	2.67	2.77	2.77	2.87	2.87	2.97
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-
Costs	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-
Operating Profit/(Loss)	**5.13**	**2.49**	**5.13**	**2.58**	**5.14**	**2.67**	**5.14**	**2.77**	**5.15**	**2.87**	**5.16**
Finance Revenue	**58.70**	**59.03**	**59.38**	**59.66**	**59.97**	**60.20**	**60.45**	**60.66**	**60.89**	**61.04**	**61.20**
Loan Receivable income recognised	58.49	58.83	59.18	59.47	59.77	60.00	60.25	60.46	60.68	60.82	60.97
Interest Income	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.23
Finance Cost	**(33.88)**	**(32.99)**	**(32.94)**	**(32.03)**	**(31.94)**	**(31.00)**	**(30.86)**	**(30.06)**	**(29.70)**	**(28.71)**	**(28.45)**
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(33.88)	(32.99)	(32.94)	(32.03)	(31.94)	(31.00)	(30.86)	(30.06)	(29.70)	(28.71)	(28.45)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-	-
Interest Capitalised											
Net Income before Tax and Amortisation	**29.94**	**28.52**	**31.57**	**30.21**	**33.17**	**31.87**	**34.74**	**33.36**	**36.34**	**35.19**	**37.91**
Amortisation											
Net Income before Tax	**29.94**	**28.52**	**31.57**	**30.21**	**33.17**	**31.87**	**34.74**	**33.36**	**36.34**	**35.19**	**37.91**
Taxation	**(8.98)**	**(8.56)**	**(9.47)**	**(9.06)**	**(9.95)**	**(9.56)**	**(10.42)**	**(10.01)**	**(10.90)**	**(10.56)**	**(11.37)**
Normal Tax	(1.91)	(1.39)	(2.59)	(2.09)	(3.29)	(2.83)	(3.87)	(3.39)	(4.64)	(4.25)	(5.45)
Deferred Tax	(7.07)	(7.17)	(6.88)	(6.97)	(6.66)	(6.73)	(6.55)	(6.61)	(6.26)	(6.30)	(5.92)
Dividend Tax											
Net Income after Tax	**20.96**	**19.96**	**22.10**	**21.15**	**23.22**	**22.31**	**24.32**	**23.35**	**25.44**	**24.63**	**26.53**
Dividends	**(14.07)**	**(14.83)**	**(15.03)**	**(15.75)**	**(15.98)**	**(16.67)**	**(16.57)**	**(16.09)**	**(15.18)**	**(15.79)**	**(16.14)**
Ordinary Shareholders	(14.07)	(14.83)	(15.03)	(15.75)	(15.98)	(16.67)	(16.57)	(16.09)	(15.18)	(15.79)	(16.14)
Retained Income for the Year	**6.89**	**5.14**	**7.07**	**5.40**	**7.24**	**5.64**	**7.75**	**7.26**	**10.26**	**8.84**	**10.40**
Opening Retained Income	**46.76**	**53.65**	**58.79**	**65.86**	**71.26**	**78.49**	**84.14**	**91.89**	**99.14**	**109.40**	**118.24**
Closing Retained Income	**53.65**	**58.79**	**65.86**	**71.26**	**78.49**	**84.14**	**91.89**	**99.14**	**109.40**	**118.24**	**128.64**

Annex G - V: Projected Cash Flow Statement (RIGID – 6-Lanes Expressway)

Toll Road PPP Project: Kibaha to Morogoro
PPP Cash Flow Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27
Flags									
Financial Period	1	1	2	2	3	3	4	4	5
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6
Development/ Construction Period	1	1	1	1	1	1	1	1	0
Service Period	0	0	0	0	0	0	0	0	1
Operating Activities									
Profit Before Tax	(0.95)	1.12	1.09	1.92	3.58	11.70	22.99	38.44	42.21
Adjustment to reconcile PBT to net cash flows									
Non-cash:									
Interest Income (Loan Receivable income recognised)	-	(2.49)	(3.11)	(5.78)	(13.02)	(30.81)	(53.43)	(76.63)	(87.54)
Interest Expense	0.95	1.37	2.03	3.86	9.44	19.11	30.43	38.20	53.49
Amortisation	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	-	-	-	-	-	-	-	(0.00)	(5.44)
Movements in Working Capital									
(Increase) in Accounts Receivable	-	-	-	-	-	-	-	(61.88)	-
Increase in Accounts Payable									
Interest Paid on Senior Debt T1	-	-	-	-	-	-	-	-	(53.49)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-
Taxation Paid	-	-	-	-	-	-	-	(0.00)	(1.80)
Vat Paid									
Dividends Paid	-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(18.09)
Net Cash Generated from Operations	**-**	**(0.12)**	**(0.40)**	**(0.07)**	**(0.07)**	**(0.07)**	**(0.07)**	**(61.95)**	**(70.66)**
Investment Activities									
Capital Cost - ICW	(0.20)	(0.57)	(27.65)	(87.08)	(223.38)	(271.63)	(257.44)	(67.61)	-
Facility Cost - ICW	(14.47)	(1.94)	(1.92)	(1.78)	(1.49)	(0.96)	(0.45)	(0.13)	-
Concessionaire Costs - At Financial Close	(15.61)	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	(3.50)	(3.50)	(3.57)	(3.57)	(3.64)	(3.64)	(3.71)	(3.71)	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	(1.97)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	(1.42)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	-	-	-	-	-	-	-	-	82.44
Net Cash Utilised in Investing Activities	**(33.78)**	**(6.00)**	**(33.14)**	**(92.42)**	**(228.50)**	**(276.22)**	**(261.60)**	**(71.45)**	**79.05**
Cash Raised from Financing Activities									
Government Contribution	-	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	26.71	4.75	25.97	72.33	178.75	216.06	204.63	104.32	(8.39)
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Share Capital	7.45	1.32	7.24	20.16	49.83	60.23	57.04	29.08	-
Net Cash Raised from Financing Activities	**34.16**	**6.07**	**33.21**	**92.49**	**228.57**	**276.30**	**261.67**	**133.40**	**(8.39)**
Changes in Cash Position	**0.38**	**(0.05)**	**(0.33)**	**-**	**-**	**-**	**-**	**-**	**(0.00)**
Cash at the Beginning of Year	**-**	**0**	**0**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**
Cash at End of Year	**0**	**0**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**	**(0)**

Annex G - V: Projected Cash Flow Statement (RIGID – 6-Lanes Expressway) Continue

Toll Road PPP Project: Kibaha to Morogoro
PPP Cash Flow Statement
Currency & Unit = USD Millions

Semi-Annual Periods	30-Jun-28	31-Dec-28	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33
Flags											
Financial Period	5	6	6	7	7	8	8	9	9	10	10
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1	1	1
Operating Activities											
Profit Before Tax	38.40	44.80	41.43	47.38	44.14	49.92	46.81	52.41	49.22	54.93	52.14
Adjustment to reconcile PBT to net cash flows											
Non-cash:											
Interest Income (Loan Receivable income recognised)	(88.17)	(88.84)	(89.41)	(90.03)	(90.54)	(91.08)	(91.51)	(91.98)	(92.37)	(92.80)	(93.09)
Interest Expense	52.47	52.11	50.77	50.63	49.27	49.06	47.67	47.39	46.22	45.61	44.14
Amortisation	-	-	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	(0.00)	(5.27)	(0.00)	(5.10)	0.00	(4.93)	0.00	(4.75)	0.00	(4.57)	0.00
Movements in Working Capital											
(Increase) in Accounts Receivable	0.49	-	0.48	-	0.47	-	0.46	-	(1.31)	(3.51)	(3.08)
Increase in Accounts Payable											
Interest Paid on Senior Debt T1	(52.47)	(52.11)	(50.77)	(50.63)	(49.27)	(49.06)	(47.67)	(47.39)	(46.22)	(45.61)	(44.14)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-
Taxation Paid	(0.47)	(2.79)	(1.61)	(3.83)	(2.70)	(4.91)	(3.84)	(5.80)	(4.72)	(6.97)	(6.05)
Vat Paid											
Dividends Paid	(19.90)	(19.67)	(21.33)	(21.26)	(22.84)	(22.85)	(24.36)	(23.89)	(23.65)	(21.96)	(23.33)
Net Cash Generated from Operations	**(69.65)**	**(71.78)**	**(70.44)**	**(72.84)**	**(71.47)**	**(73.85)**	**(72.45)**	**(74.01)**	**(72.83)**	**(74.88)**	**(73.41)**
Investment Activities											
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	(1.97)	(2.03)	(2.03)	(2.10)	(2.10)	(2.16)	(2.16)	(2.23)	(2.23)	(2.30)	(2.30)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	(1.42)	(1.46)	(1.46)	(1.51)	(1.51)	(1.56)	(1.56)	(2.41)	(2.41)	(2.48)	(2.48)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	82.44	84.55	84.55	86.72	86.72	88.94	88.94	91.24	91.24	93.60	93.60
Net Cash Utilised in Investing Activities	**79.05**	**81.05**	**81.05**	**83.11**	**83.11**	**85.23**	**85.23**	**86.61**	**86.61**	**88.81**	**88.81**
Cash Raised from Financing Activities											
Government Contribution	-	-	-	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	(9.41)	(9.28)	(10.61)	(10.28)	(11.64)	(11.38)	(12.78)	(12.60)	(13.77)	(13.93)	(15.41)
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-
Share Capital	-	-	-	-	-	-	-	-	-	-	-
Net Cash Raised from Financing Activities	**(9.41)**	**(9.28)**	**(10.61)**	**(10.28)**	**(11.64)**	**(11.38)**	**(12.78)**	**(12.60)**	**(13.77)**	**(13.93)**	**(15.41)**
Changes in Cash Position	**-**	**-**	**(0.00)**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.00**
Cash at the Beginning of Year	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Cash at End of Year	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Annex G - VI: Projected Balance Sheet (RIGID – 6-Lanes Expressway)

Toll Road PPP Project: Kibaha to
PPP Balance Sheet
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27
Flags									
Financial Period	1	1	2	2	3	3	4	4	5
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1
Concession Commencement Start	1	0	0	0	0	0	0	0	0
Concession Commencement End	0	0	0	0	0	0	0	0	0
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6
Development/ Construction Period	1	1	1	1	1	1	1	1	0
Service Period	0	0	0	0	0	0	0	0	1
Assets									
Non current Assets									
Other Financial Assets	**33.78**	**42.27**	**78.52**	**176.73**	**418.25**	**725.28**	**1,040.31**	**1,188.39**	**1,196.88**
Opening Balance	-	33.78	42.27	78.52	176.73	418.25	725.28	1,040.31	1,188.39
Advances	33.78	6.00	33.14	92.42	228.50	276.22	261.60	71.45	3.39
Repayment	-	2.49	3.11	5.78	13.02	30.81	53.43	76.63	5.10
Closing Balance	33.78	42.27	78.52	176.73	418.25	725.28	1,040.31	1,188.39	1,196.88
Current Assets	**0.38**	**0.33**	**-**	**-**	**-**	**-**	**-**	**61.88**	**61.88**
MRA	-	-	-	-	-	-	-	-	-
DSRA - Senior Debt Tranche 1	-	-	-	-	-	-	-	61.88	61.88
DSRA - Senior Debt Tranche 2	-	-	-	-	-	-	-	-	-
Cash	0.38	0.33	-	-	-	-	-	-	-
VAT Control Account									
Total Assets	**34.16**	**42.60**	**78.52**	**176.73**	**418.25**	**725.28**	**1,040.31**	**1,250.27**	**1,258.76**
Equity and Liabilities									
Equity Capital	**7.45**	**8.77**	**16.01**	**36.17**	**86.00**	**146.23**	**203.28**	**232.36**	**232.36**
Subordinated Shareholder Loans	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Retained Income	**(0.66)**	**-**	**0.36**	**1.63**	**4.06**	**12.18**	**28.20**	**55.03**	**66.49**
Current	(0.66)	0.66	0.36	1.27	2.43	8.12	16.02	26.83	11.46
Prior	-	(0.66)	-	0.36	1.63	4.06	12.18	28.20	55.03
Total Equity	**6.78**	**8.77**	**16.37**	**37.80**	**90.07**	**158.41**	**231.48**	**287.39**	**298.85**
Non Current Liabilities	**27.38**	**33.83**	**62.16**	**138.92**	**328.18**	**566.87**	**808.83**	**962.88**	**959.91**
Senior Debt - Tranche 1	27.66	33.78	61.78	137.97	326.16	561.33	796.40	938.91	925.08
Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-
Mezz Debt	-	-	-	-	-	-	-	-	-
Deferred Tax Liability	(0.28)	0.05	0.38	0.95	2.03	5.54	12.43	23.97	34.83
Current Liabilities	**-**	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Bank Overdraft	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAT Control Account									
Total Liabilities	**27.38**	**33.83**	**62.16**	**138.92**	**328.18**	**566.87**	**808.83**	**962.88**	**959.91**
Total Liabilities and Equity	**34.16**	**42.60**	**78.52**	**176.73**	**418.25**	**725.28**	**1,040.31**	**1,250.27**	**1,258.76**

Annex G - VI: Projected Balance Sheet (RIGID – 6-Lanes Expressway) Continue…

Toll Road PPP Project: Kibaha to
PPP Balance Sheet
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags									
Financial Period	7	7	8	8	9	9	10	10	11
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1
Concession Commencement Start	0	0	0	0	0	0	0	0	0
Concession Commencement End	0	0	0	0	0	0	0	0	0
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1
Assets									
Non current Assets									
Other Financial Assets	**833.43**	**837.72**	**840.99**	**844.49**	**847.39**	**850.51**	**852.45**	**854.53**	**855.33**
Opening Balance	829.42	833.43	837.72	840.99	844.49	847.39	850.51	852.45	854.53
Advances	2.40	2.40	2.48	2.48	3.09	3.09	3.19	3.19	3.29
Repayment	1.61	1.89	0.79	1.02	(0.19)	0.02	(1.25)	(1.11)	(2.49)
Closing Balance	833.43	837.72	840.99	844.49	847.39	850.51	852.45	854.53	855.33
Current Assets	**40.34**	**40.10**	**40.10**	**39.88**	**39.88**	**40.82**	**43.17**	**45.29**	**47.64**
MRA	-	-	-	-	-	1.17	3.51	5.86	8.20
DSRA - Senior Debt Tranche 1	40.34	40.10	40.10	39.88	39.88	39.65	39.65	39.44	39.44
DSRA - Senior Debt Tranche 2	-	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-	-
VAT Control Account									
Total Assets	**873.76**	**877.83**	**881.09**	**884.36**	**887.27**	**891.33**	**895.62**	**899.82**	**902.97**
Equity and Liabilities									
Equity Capital	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**	**158.46**
Subordinated Shareholder Loans	-	-	-	-	-	-	-	-	-
Retained Income	**65.86**	**71.26**	**78.49**	**84.14**	**91.89**	**99.14**	**109.40**	**118.24**	**128.64**
Current	7.07	5.40	7.24	5.64	7.75	7.26	10.26	8.84	10.40
Prior	58.79	65.86	71.26	78.49	84.14	91.89	99.14	109.40	118.24
Total Equity	**224.32**	**229.72**	**236.95**	**242.60**	**250.35**	**257.60**	**267.86**	**276.70**	**287.10**
Non Current Liabilities	**649.45**	**648.11**	**644.14**	**641.77**	**636.92**	**633.73**	**627.75**	**623.12**	**615.86**
Senior Debt - Tranche 1	598.23	589.92	579.29	570.19	558.79	548.98	536.75	525.81	512.63
Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-
Mezz Debt	-	-	-	-	-	-	-	-	-
Deferred Tax Liability	51.22	58.19	64.85	71.58	78.13	84.74	91.01	97.31	103.23
Current Liabilities	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Bank Overdraft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAT Control Account									
Total Liabilities	**649.45**	**648.11**	**644.14**	**641.77**	**636.92**	**633.73**	**627.75**	**623.12**	**615.86**
Total Liabilities and Equity	**873.76**	**877.83**	**881.09**	**884.36**	**887.27**	**891.33**	**895.62**	**899.82**	**902.97**

Annex G - VI: Projected Income Statement (FLEXIBLE - 4-Lanes Expressway)

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods		31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27
Flags										
Income		-	-	-	-	-	-	-	0.00	4.61
Traffic Revenue	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	27.78	-	-	-	-	-	-	-	0.00	2.21
Rental Income	189.59	-	-	-	-	-	-	-	-	2.40
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-
Costs		-	-	-	-	-	-	-	-	-
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-
	-									
Operating Profit/(Loss)		-	-	-	-	-	-	-	0.00	4.61
Finance Revenue		-	2.56	3.77	5.21	9.07	17.46	27.81	38.84	44.58
Loan Receivable income recognised	2,117.26	-	2.56	3.77	5.21	9.07	17.46	27.81	38.84	44.42
Interest Income	7.38	-	-	-	-	-	-	-	-	0.16
Finance Cost		(0.91)	(1.55)	(2.17)	(3.13)	(6.02)	(10.46)	(15.82)	(19.62)	(26.51)
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(712.54)	(0.91)	(1.55)	(2.17)	(3.13)	(6.02)	(10.46)	(15.82)	(19.62)	(26.51)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-
Interest Capitalised	-									
Net Income before Tax and Amortisation		(0.91)	1.02	1.60	2.08	3.05	7.00	11.99	19.22	22.68
Amortisation										
Net Income before Tax		(0.91)	1.02	1.60	2.08	3.05	7.00	11.99	19.22	22.68
Taxation		0.27	(0.30)	(0.48)	(0.63)	(0.92)	(2.10)	(3.60)	(5.76)	(6.80)
Normal Tax	(502.83)	-	-	-	-	-	-	-	(0.00)	(1.63)
Deferred Tax	0.07	0.27	(0.30)	(0.48)	(0.63)	(0.92)	(2.10)	(3.60)	(5.76)	(5.17)
Dividend Tax	-									
Net Income after Tax		(0.64)	0.71	1.12	1.46	2.14	4.90	8.39	13.45	15.88
Dividends		-	(0.07)	(0.45)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(11.35)
Ordinary Shareholders	(1,246.26)	-	(0.07)	(0.45)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(11.35)
	-									
Retained Income for the Year		(0.64)	0.64	0.67	1.39	2.06	4.82	8.32	13.38	4.52
Opening Retained Income		-	(0.64)	-	0.67	2.05	4.12	8.94	17.26	30.64
Closing Retained Income		(0.64)	-	0.67	2.05	4.12	8.94	17.26	30.64	35.16

Annex G - VI: Projected Income Statement (FLEXIBLE - 4-Lanes Expressway) Continue…

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods	30-Jun-28	31-Dec-28	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags												
Income	**2.40**	**4.63**	**2.49**	**4.65**	**2.58**	**4.67**	**2.67**	**4.70**	**2.77**	**4.72**	**2.87**	**4.75**
Traffic Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	0.00	2.14	(0.00)	2.07	0.00	2.00	(0.00)	1.93	(0.00)	1.86	(0.00)	1.78
Rental Income	2.40	2.49	2.49	2.58	2.58	2.67	2.67	2.77	2.77	2.87	2.87	2.97
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-	-
Costs	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-	-
Operating Profit/(Loss)	**2.40**	**4.63**	**2.49**	**4.65**	**2.58**	**4.67**	**2.67**	**4.70**	**2.77**	**4.72**	**2.87**	**4.75**
Finance Revenue	**44.79**	**45.02**	**45.21**	**45.42**	**45.55**	**45.71**	**45.79**	**45.88**	**45.92**	**45.96**	**47.02**	**48.17**
Loan Receivable income recognised	44.63	44.86	45.03	45.22	45.35	45.48	45.55	45.62	45.64	45.67	46.80	48.02
Interest Income	0.15	0.16	0.18	0.20	0.21	0.23	0.24	0.26	0.27	0.29	0.22	0.15
Finance Cost	**(25.99)**	**(25.84)**	**(25.16)**	**(25.12)**	**(24.43)**	**(24.35)**	**(23.64)**	**(23.52)**	**(22.92)**	**(22.64)**	**(21.89)**	**(21.69)**
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(25.99)	(25.84)	(25.16)	(25.12)	(24.43)	(24.35)	(23.64)	(23.52)	(22.92)	(22.64)	(21.89)	(21.69)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-	-	-
Interest Capitalised												
Net Income before Tax and Amortisation	**21.20**	**23.82**	**22.54**	**24.95**	**23.70**	**26.03**	**24.82**	**27.05**	**25.76**	**28.04**	**28.00**	**31.23**
Amortisation												
Net Income before Tax	**21.20**	**23.82**	**22.54**	**24.95**	**23.70**	**26.03**	**24.82**	**27.05**	**25.76**	**28.04**	**28.00**	**31.23**
Taxation	**(6.36)**	**(7.14)**	**(6.76)**	**(7.48)**	**(7.11)**	**(7.81)**	**(7.44)**	**(8.12)**	**(7.73)**	**(8.41)**	**(8.40)**	**(9.37)**
Normal Tax	(1.12)	(2.14)	(1.71)	(2.68)	(2.27)	(3.25)	(2.86)	(3.73)	(3.33)	(4.22)	(3.74)	(4.69)
Deferred Tax	(5.23)	(5.00)	(5.05)	(4.80)	(4.84)	(4.56)	(4.58)	(4.39)	(4.39)	(4.19)	(4.66)	(4.68)
Dividend Tax												
Net Income after Tax	**14.84**	**16.67**	**15.78**	**17.46**	**16.59**	**18.22**	**17.37**	**18.94**	**18.03**	**19.63**	**19.60**	**21.86**
Dividends	**(10.42)**	**(8.86)**	**(9.50)**	**(9.66)**	**(10.27)**	**(10.46)**	**(11.05)**	**(11.02)**	**(11.61)**	**(11.95)**	**(14.17)**	**(16.03)**
Ordinary Shareholders	(10.42)	(8.86)	(9.50)	(9.66)	(10.27)	(10.46)	(11.05)	(11.02)	(11.61)	(11.95)	(14.17)	(16.03)
Retained Income for the Year	**4.42**	**7.82**	**6.28**	**7.80**	**6.32**	**7.76**	**6.32**	**7.91**	**6.42**	**7.68**	**5.43**	**5.83**
Opening Retained Income	**35.16**	**39.58**	**47.40**	**53.68**	**61.48**	**67.80**	**75.56**	**81.88**	**89.79**	**96.21**	**103.89**	**109.32**
Closing Retained Income	**39.58**	**47.40**	**53.68**	**61.48**	**67.80**	**75.56**	**81.88**	**89.79**	**96.21**	**103.89**	**109.32**	**115.15**

Annex G - VII: Projected Cash Flow Statement (FLEXIBLE - 4-Lanes Expressway)

Toll Road PPP Project: Kibaha to Morogoro
PPP Cash Flow Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27
Flags									
Financial Period	1	1	2	2	3	3	4	4	5
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6
Development/ Construction Period	1	1	1	1	1	1	1	1	0
Service Period	0	0	0	0	0	0	0	0	1
Operating Activities									
Profit Before Tax	(0.91)	1.02	1.60	2.08	3.05	7.00	11.99	19.22	22.68
Adjustment to reconcile PBT to net cash flows									
Non-cash:									
Interest Income (Loan Receivable income recognised)	-	(2.56)	(3.77)	(5.21)	(9.07)	(17.46)	(27.81)	(38.84)	(44.42)
Interest Expense	0.91	1.55	2.17	3.13	6.02	10.46	15.82	19.62	26.51
Amortisation	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	-	-	-	-	-	-	-	(0.00)	(2.21)
Movements in Working Capital									
(Increase) in Accounts Receivable	-	-	-	-	-	-	-	(31.03)	-
Increase in Accounts Payable									
Interest Paid on Senior Debt T1	-	-	-	-	-	-	-	-	(26.51)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-
Taxation Paid	-	-	-	-	-	-	-	(0.00)	(1.63)
Vat Paid									
Dividends Paid	-	(0.07)	(0.45)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(11.35)
Net Cash Generated from Operations	**-**	**(0.07)**	**(0.45)**	**(0.07)**	**(0.07)**	**(0.07)**	**(0.07)**	**(31.10)**	**(36.94)**
Investment Activities									
Capital Cost - ICW	(9.11)	(9.70)	(11.74)	(43.93)	(102.92)	(121.96)	(121.24)	(34.80)	-
Facility Cost - ICW	(7.33)	(0.94)	(0.92)	(0.85)	(0.70)	(0.46)	(0.23)	(0.07)	-
Concessionaire Costs - At Financial Close	(15.61)	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	(3.50)	(3.50)	(3.57)	(3.57)	(3.64)	(3.64)	(3.71)	(3.71)	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	(0.88)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	(0.64)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	-	-	-	-	-	-	-	-	42.98
Net Cash Utilised in Investing Activities	**(35.55)**	**(14.14)**	**(16.22)**	**(48.35)**	**(107.26)**	**(126.06)**	**(125.18)**	**(38.58)**	**41.46**
Cash Raised from Financing Activities									
Government Contribution	-	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	28.03	11.08	12.71	37.78	83.74	98.41	97.72	54.37	(4.52)
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Share Capital	7.90	3.12	3.58	10.64	23.59	27.72	27.53	15.32	-
Net Cash Raised from Financing Activities	**35.93**	**14.21**	**16.29**	**48.42**	**107.33**	**126.13**	**125.25**	**69.68**	**(4.52)**
Changes in Cash Position	**0.38**	**(0.00)**	**(0.38)**	**-**	**-**	**-**	**-**	**-**	**-**
Cash at the Beginning of Year	**-**	**0.38**	**0.38**	**-**	**-**	**-**	**-**	**-**	**-**
Cash at End of Year	**0.38**	**0.38**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Annex G - VII: Projected Cash Flow Statement (FLEXIBLE - 4-Lanes Expressway) Continue…

Toll Road PPP Project: Kibaha to Morogoro PPP Cash Flow Statement Currency & Unit = USD Millions												
Semi-Annual Periods	**30-Jun-28**	**31-Dec-28**	**30-Jun-29**	**31-Dec-29**	**30-Jun-30**	**31-Dec-30**	**30-Jun-31**	**31-Dec-31**	**30-Jun-32**	**31-Dec-32**	**30-Jun-33**	**31-Dec-33**
Flags												
Financial Period	5	6	6	7	7	8	8	9	9	10	10	11
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1	1	1	1
Operating Activities												
Profit Before Tax	21.20	23.82	22.54	24.95	23.70	26.03	24.82	27.05	25.76	28.04	28.00	31.23
Adjustment to reconcile PBT to net cash flows												
Non-cash:												
Interest Income (Loan Receivable income recognised)	(44.63)	(44.86)	(45.03)	(45.22)	(45.35)	(45.48)	(45.55)	(45.62)	(45.64)	(45.67)	(46.80)	(48.02)
Interest Expense	25.99	25.84	25.16	25.12	24.43	24.35	23.64	23.52	22.92	22.64	21.89	21.69
Amortisation	-	-	-	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	(0.00)	(2.14)	0.00	(2.07)	(0.00)	(2.00)	0.00	(1.93)	0.00	(1.86)	0.00	(1.78)
Movements in Working Capital												
(Increase) in Accounts Receivable	(1.44)	(3.28)	(3.09)	(3.28)	(3.09)	(3.28)	(3.10)	(3.28)	(3.10)	13.13	14.95	-
Increase in Accounts Payable												
Interest Paid on Senior Debt T1	(25.99)	(25.84)	(25.16)	(25.12)	(24.43)	(24.35)	(23.64)	(23.52)	(22.92)	(22.64)	(21.89)	(21.69)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Paid	(1.12)	(2.14)	(1.71)	(2.68)	(2.27)	(3.25)	(2.86)	(3.73)	(3.33)	(4.22)	(3.74)	(4.69)
Vat Paid												
Dividends Paid	(10.42)	(8.86)	(9.50)	(9.66)	(10.27)	(10.46)	(11.05)	(11.02)	(11.61)	(11.95)	(14.17)	(16.03)
Net Cash Generated from Operations	**(36.42)**	**(37.47)**	**(36.79)**	**(37.97)**	**(37.28)**	**(38.45)**	**(37.74)**	**(38.53)**	**(37.93)**	**(22.52)**	**(21.77)**	**(39.28)**
Investment Activities												
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	(0.88)	(0.91)	(0.91)	(0.94)	(0.94)	(0.97)	(0.97)	(1.00)	(1.00)	(1.03)	(1.03)	(1.06)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	(0.64)	(0.66)	(0.66)	(0.68)	(0.68)	(0.70)	(0.70)	(1.08)	(1.08)	(1.11)	(1.11)	(1.15)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	(16.41)	(16.41)	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	42.98	44.03	44.03	45.11	45.11	46.21	46.21	47.35	47.35	48.52	48.52	49.71
Net Cash Utilised in Investing Activities	**41.46**	**42.46**	**42.46**	**43.49**	**43.49**	**44.55**	**44.55**	**45.27**	**45.27**	**29.96**	**29.96**	**47.50**
Cash Raised from Financing Activities												
Government Contribution	-	-	-	-	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	(5.04)	(4.99)	(5.67)	(5.52)	(6.21)	(6.10)	(6.81)	(6.74)	(7.34)	(7.44)	(8.19)	(8.22)
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-	-
Share Capital	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Raised from Financing Activities	**(5.04)**	**(4.99)**	**(5.67)**	**(5.52)**	**(6.21)**	**(6.10)**	**(6.81)**	**(6.74)**	**(7.34)**	**(7.44)**	**(8.19)**	**(8.22)**
Changes in Cash Position	**(0.00)**	**0.00**	**(0.00)**	**-**	**(0.00)**	**0.00**	**(0.00)**	**(0.00)**	**-**	**-**	**-**	**-**
Cash at the Beginning of Year	-	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Cash at End of Year	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Annex G - VIII: Projected Balance Sheet (FLEXIBLE - 4-Lanes Expressway)

Toll Road PPP Project: Kibaha to
PPP Balance Sheet
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27	30-Jun-28	31-Dec-28
Flags											
Financial Period	1	1	2	2	3	3	4	4	5	5	6
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1	1	1
Concession Commencement Start	1	0	0	0	0	0	0	0	0	0	0
Concession Commencement End	0	0	0	0	0	0	0	0	0	0	0
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6	6	6
Development/ Construction Period	1	1	1	1	1	1	1	1	0	0	0
Service Period	0	0	0	0	0	0	0	0	1	1	1
Assets											
Non current Assets											
Other Financial Assets	**35.55**	**52.25**	**72.24**	**125.80**	**242.13**	**385.64**	**538.63**	**616.05**	**619.01**	**622.18**	**624.58**
Opening Balance	-	35.55	52.25	72.24	125.80	242.13	385.64	538.63	616.05	619.01	622.18
Advances	35.55	14.14	16.22	48.35	107.26	126.06	125.18	38.58	1.52	1.52	1.57
Repayment	-	2.56	3.77	5.21	9.07	17.46	27.81	38.84	1.44	1.66	0.83
Closing Balance	35.55	52.25	72.24	125.80	242.13	385.64	538.63	616.05	619.01	622.18	624.58
Current Assets	**0.38**	**0.38**	**-**	**-**	**-**	**-**	**-**	**31.03**	**31.03**	**32.47**	**35.76**
MRA	-	-	-	-	-	-	-	-	-	1.64	4.92
DSRA - Senior Debt Tranche 1	-	-	-	-	-	-	-	31.03	31.03	30.83	30.83
DSRA - Senior Debt Tranche 2	-	-	-	-	-	-	-	-	-	-	-
Cash	0.38	0.38	-	-	-	-	-	-	-	-	-
VAT Control Account											
Total Assets	**35.93**	**52.63**	**72.24**	**125.80**	**242.13**	**385.64**	**538.63**	**647.08**	**650.04**	**654.65**	**660.34**
Equity and Liabilities											
Equity Capital	**7.90**	**11.02**	**14.60**	**25.24**	**48.83**	**76.56**	**104.09**	**119.40**	**119.40**	**119.40**	**119.40**
Subordinated Shareholder Loans	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Retained Income	**(0.64)**	**-**	**0.67**	**2.05**	**4.12**	**8.94**	**17.26**	**30.64**	**35.16**	**39.58**	**47.40**
Current	(0.64)	0.64	0.67	1.39	2.06	4.82	8.32	13.38	4.52	4.42	7.82
Prior	-	(0.64)	-	0.67	2.05	4.12	8.94	17.26	30.64	35.16	39.58
Total Equity	**7.26**	**11.02**	**15.27**	**27.30**	**52.95**	**85.50**	**121.35**	**150.04**	**154.56**	**158.99**	**166.80**
Non Current Liabilities	**28.67**	**41.61**	**56.97**	**98.50**	**189.17**	**300.14**	**417.28**	**497.04**	**495.47**	**495.67**	**493.53**
Senior Debt - Tranche 1	28.95	41.58	56.46	97.36	187.12	295.99	409.53	483.52	476.79	471.75	464.61
Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-
Mezz Debt	-	-	-	-	-	-	-	-	-	-	-
Deferred Tax Liability	(0.27)	0.03	0.51	1.13	2.05	4.15	7.75	13.51	18.68	23.92	28.92
Current Liabilities	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0.00**	**0.00**
Bank Overdraft	-	-	-	-	-	-	-	-	-	0.00	0.00
VAT Control Account											
Total Liabilities	**28.67**	**41.61**	**56.97**	**98.50**	**189.17**	**300.14**	**417.28**	**497.04**	**495.47**	**495.67**	**493.53**
Total Liabilities and Equity	**35.93**	**52.63**	**72.24**	**125.80**	**242.13**	**385.64**	**538.63**	**647.08**	**650.04**	**654.65**	**660.34**

Annex G - VIII: Projected Balance Sheet (FLEXIBLE - 4-Lanes Expressway) Continue

Toll Road PPP Project: Kibaha to
PPP Balance Sheet
Currency & Unit = USD Millions

Semi-Annual Periods	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags										
Financial Period	6	7	7	8	8	9	9	10	10	11
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1	1
Concession Commencement Start	0	0	0	0	0	0	0	0	0	0
Concession Commencement End	0	0	0	0	0	0	0	0	0	0
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1	1
Assets										
Non current Assets										
Other Financial Assets	**627.15**	**628.88**	**630.74**	**631.67**	**632.67**	**633.02**	**633.38**	**649.09**	**665.94**	**666.45**
Opening Balance	624.58	627.15	628.88	630.74	631.67	632.67	633.02	633.38	649.09	665.94
Advances	1.57	1.61	1.61	1.67	1.67	2.08	2.08	18.56	18.56	2.21
Repayment	1.01	0.12	0.24	(0.73)	(0.67)	(1.73)	(1.71)	(2.85)	(1.71)	(1.70)
Closing Balance	627.15	628.88	630.74	631.67	632.67	633.02	633.38	649.09	665.94	666.45
Current Assets	**38.85**	**42.13**	**45.22**	**48.50**	**51.60**	**54.89**	**57.99**	**44.86**	**29.91**	**29.91**
MRA	8.21	11.49	14.77	18.06	21.34	24.62	27.90	14.77	-	-
DSRA - Senior Debt Tranche 1	30.64	30.64	30.45	30.45	30.26	30.26	30.08	30.08	29.91	29.91
DSRA - Senior Debt Tranche 2	-	-	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-	-	-
VAT Control Account										
Total Assets	**666.00**	**671.01**	**675.96**	**680.17**	**684.27**	**687.90**	**691.37**	**693.95**	**695.84**	**696.36**
Equity and Liabilities										
Equity Capital	**119.40**	**119.40**	**119.40**	**119.40**	**119.40**	**119.40**	**119.40**	**119.40**	**119.40**	**119.40**
Subordinated Shareholder Loans	-	-	-	-	-	-	-	-	-	-
Retained Income	**53.68**	**61.48**	**67.80**	**75.56**	**81.88**	**89.79**	**96.21**	**103.89**	**109.32**	**115.15**
Current	6.28	7.80	6.32	7.76	6.32	7.91	6.42	7.68	5.43	5.83
Prior	47.40	53.68	61.48	67.80	75.56	81.88	89.79	96.21	103.89	109.32
Total Equity	**173.08**	**180.88**	**187.20**	**194.96**	**201.29**	**209.20**	**215.62**	**223.30**	**228.72**	**234.55**
Non Current Liabilities	**492.92**	**490.13**	**488.75**	**485.21**	**482.99**	**478.70**	**475.75**	**470.65**	**467.12**	**461.81**
Senior Debt - Tranche 1	458.95	451.35	445.14	437.04	430.23	421.56	414.22	404.92	396.73	386.73
Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-
Mezz Debt	-	-	-	-	-	-	-	-	-	-
Deferred Tax Liability	33.97	38.77	43.61	48.18	52.76	57.14	61.54	65.73	70.39	75.07
Current Liabilities	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Bank Overdraft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VAT Control Account										
Total Liabilities	**492.92**	**490.13**	**488.75**	**485.21**	**482.99**	**478.70**	**475.75**	**470.65**	**467.12**	**461.81**
Total Liabilities and Equity	**666.00**	**671.01**	**675.96**	**680.17**	**684.27**	**687.90**	**691.37**	**693.95**	**695.84**	**696.36**

Annex G - IX: Projected Income Statement (FLEXIBLE - 6-Lanes Expressway)

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods		31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27
Flags										
Income	-	-	-	-	-	-	-	-	(0.00)	5.58
Traffic Revenue	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	39.90	-	-	-	-	-	-	-	(0.00)	3.18
Rental Income	189.59	-	-	-	-	-	-	-	-	2.40
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-
Costs		-	-	-	-	-	-	-	-	-
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-
	-									
Operating Profit/(Loss)		-	-	-	-	-	-	-	(0.00)	5.58
Finance Revenue		-	3.19	4.85	6.86	12.55	25.15	40.73	57.36	65.91
Loan Receivable income recognised	3,137.92	-	3.19	4.85	6.86	12.55	25.15	40.73	57.36	65.68
Interest Income	10.79	-	-	-	-	-	-	-	-	0.23
Finance Cost		(1.09)	(1.92)	(2.77)	(4.12)	(8.35)	(14.94)	(22.86)	(28.47)	(38.40)
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(1,030.26)	(1.09)	(1.92)	(2.77)	(4.12)	(8.35)	(14.94)	(22.86)	(28.47)	(38.40)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-
Interest Capitalised	-									
Net Income before Tax and Amortisation		(1.09)	1.27	2.08	2.74	4.20	10.21	17.87	28.89	33.09
Amortisation										
Net Income before Tax		(1.09)	1.27	2.08	2.74	4.20	10.21	17.87	28.89	33.09
Taxation		0.33	(0.38)	(0.62)	(0.82)	(1.26)	(3.06)	(5.36)	(8.67)	(9.93)
Normal Tax	(725.17)	-	-	-	-	-	-	-	-	(2.42)
Deferred Tax	(0.09)	0.33	(0.38)	(0.62)	(0.82)	(1.26)	(3.06)	(5.36)	(8.67)	(7.51)
Dividend Tax	-									
Net Income after Tax		(0.77)	0.89	1.46	1.92	2.94	7.15	12.51	20.22	23.16
Dividends		-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(16.61)
Ordinary Shareholders	(1,795.78)	-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(16.61)
	-									
Retained Income for the Year		(0.77)	0.77	1.06	1.85	2.87	7.07	12.44	20.15	6.55
Opening Retained Income		-	(0.77)	-	1.06	2.91	5.77	12.84	25.28	45.43
Closing Retained Income		(0.77)	-	1.06	2.91	5.77	12.84	25.28	45.43	51.98

Annex G - IX: Projected Income Statement (FLEXIBLE - 6-Lanes Expressway) Continue…

Toll Road PPP Project: Kibaha to
PPP Income Statement
Currency & Unit = USD Millions

Semi-Annual Periods	30-Jun-28	31-Dec-28	30-Jun-29	31-Dec-29	30-Jun-30	31-Dec-30	30-Jun-31	31-Dec-31	30-Jun-32	31-Dec-32	30-Jun-33	31-Dec-33
Flags												
Income	**2.40**	**5.57**	**2.49**	**5.56**	**2.58**	**5.55**	**2.67**	**5.54**	**2.77**	**5.53**	**2.87**	**5.52**
Traffic Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Government Contribution (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	(0.00)	3.08	(0.00)	2.98	(0.00)	2.88	0.00	2.77	0.00	2.67	(0.00)	2.55
Rental Income	2.40	2.49	2.49	2.58	2.58	2.67	2.67	2.77	2.77	2.87	2.87	2.97
RAF Fund (IA Split Portion)	-	-	-	-	-	-	-	-	-	-	-	-
Costs	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	-	-	-	-
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-	-
Operating Profit/(Loss)	**2.40**	**5.57**	**2.49**	**5.56**	**2.58**	**5.55**	**2.67**	**5.54**	**2.77**	**5.53**	**2.87**	**5.52**
Finance Revenue	**66.22**	**66.58**	**66.85**	**67.16**	**67.36**	**67.58**	**67.70**	**67.83**	**67.89**	**67.95**	**69.58**	**71.32**
Loan Receivable income recognised	66.00	66.34	66.60	66.87	67.05	67.25	67.35	67.45	67.49	67.52	69.25	71.10
Interest Income	0.22	0.24	0.26	0.28	0.30	0.33	0.35	0.38	0.40	0.43	0.32	0.22
Finance Cost	**(37.65)**	**(37.43)**	**(36.45)**	**(36.39)**	**(35.39)**	**(35.27)**	**(34.25)**	**(34.08)**	**(33.21)**	**(32.80)**	**(31.72)**	**(31.42)**
Interest Expense - Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt - Tranche 1	(37.65)	(37.43)	(36.45)	(36.39)	(35.39)	(35.27)	(34.25)	(34.08)	(33.21)	(32.80)	(31.72)	(31.42)
Interest Expense - Senior Debt - Tranche 2	-	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Mezz Debt	-	-	-	-	-	-	-	-	-	-	-	-
Interest Capitalised												
Net Income before Tax and Amortisation	**30.98**	**34.71**	**32.89**	**36.32**	**34.55**	**37.86**	**36.12**	**39.30**	**37.45**	**40.68**	**40.73**	**45.43**
Amortisation												
Net Income before Tax	**30.98**	**34.71**	**32.89**	**36.32**	**34.55**	**37.86**	**36.12**	**39.30**	**37.45**	**40.68**	**40.73**	**45.43**
Taxation	**(9.29)**	**(10.41)**	**(9.87)**	**(10.90)**	**(10.36)**	**(11.36)**	**(10.84)**	**(11.79)**	**(11.23)**	**(12.20)**	**(12.22)**	**(13.63)**
Normal Tax	(1.69)	(3.15)	(2.53)	(3.93)	(3.34)	(4.74)	(4.19)	(5.43)	(4.87)	(6.13)	(5.44)	(6.79)
Deferred Tax	(7.60)	(7.26)	(7.34)	(6.97)	(7.02)	(6.61)	(6.64)	(6.36)	(6.37)	(6.08)	(6.78)	(6.84)
Dividend Tax												
Net Income after Tax	**21.68**	**24.30**	**23.02**	**25.43**	**24.18**	**26.50**	**25.29**	**27.51**	**26.21**	**28.48**	**28.51**	**31.80**
Dividends	**(15.16)**	**(12.82)**	**(13.74)**	**(13.97)**	**(14.85)**	**(15.12)**	**(15.96)**	**(15.91)**	**(16.75)**	**(17.24)**	**(20.54)**	**(23.31)**
Ordinary Shareholders	(15.16)	(12.82)	(13.74)	(13.97)	(14.85)	(15.12)	(15.96)	(15.91)	(16.75)	(17.24)	(20.54)	(23.31)
Retained Income for the Year	**6.52**	**11.48**	**9.28**	**11.46**	**9.34**	**11.38**	**9.33**	**11.60**	**9.46**	**11.24**	**7.97**	**8.49**
Opening Retained Income	**51.98**	**58.50**	**69.98**	**79.26**	**90.72**	**100.06**	**111.43**	**120.76**	**132.36**	**141.82**	**153.06**	**161.02**
Closing Retained Income	**58.50**	**69.98**	**79.26**	**90.72**	**100.06**	**111.43**	**120.76**	**132.36**	**141.82**	**153.06**	**161.02**	**169.51**

Annex G - X: Projected Cash Flow Statement (FLEXIBLE - 6-Lanes Expressway)

Toll Road PPP Project: Kibaha to Morogoro
PPP Cash Flow Statement
Currency & Unit = USD Millions

Semi-Annual Periods	31-Dec-23	30-Jun-24	31-Dec-24	30-Jun-25	31-Dec-25	30-Jun-26	31-Dec-26	30-Jun-27	31-Dec-27
Flags									
Financial Period	1	1	2	2	3	3	4	4	5
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6
Development/ Construction Period	1	1	1	1	1	1	1	1	0
Service Period	0	0	0	0	0	0	0	0	1
Operating Activities									
Profit Before Tax	(1.09)	1.27	2.08	2.74	4.20	10.21	17.87	28.89	33.09
Adjustment to reconcile PBT to net cash flows									
Non-cash:									
Interest Income (Loan Receivable income recognised)	-	(3.19)	(4.85)	(6.86)	(12.55)	(25.15)	(40.73)	(57.36)	(65.68)
Interest Expense	1.09	1.92	2.77	4.12	8.35	14.94	22.86	28.47	38.40
Amortisation	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	-	-	-	-	-	-	-	0.00	(3.18)
Movements in Working Capital									
(Increase) in Accounts Receivable	-	-	-	-	-	-	-	(44.97)	-
Increase in Accounts Payable									
Interest Paid on Senior Debt T1	-	-	-	-	-	-	-	-	(38.40)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-
Taxation Paid	-	-	-	-	-	-	-	-	(2.42)
Vat Paid									
Dividends Paid	-	(0.12)	(0.40)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(16.61)
Net Cash Generated from Operations	**-**	**(0.12)**	**(0.40)**	**(0.07)**	**(0.07)**	**(0.07)**	**(0.07)**	**(45.05)**	**(54.80)**
Investment Activities									
Capital Cost - ICW	(13.67)	(14.55)	(17.60)	(65.90)	(154.38)	(182.94)	(181.86)	(52.20)	-
Facility Cost - ICW	(10.69)	(1.38)	(1.36)	(1.26)	(1.04)	(0.69)	(0.33)	(0.10)	-
Concessionaire Costs - At Financial Close	(15.61)	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	(3.50)	(3.50)	(3.57)	(3.57)	(3.64)	(3.64)	(3.71)	(3.71)	-
Concessionaire Costs - Service Development	-	-	-	-	-	-	-	-	(1.32)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	-	-	-	-	-	-	-	-	(0.95)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-
Social Economic Expense	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	-	-	-	-	-	-	-	-	63.65
Net Cash Utilised in Investing Activities	**(43.46)**	**(19.43)**	**(22.53)**	**(70.72)**	**(159.06)**	**(187.26)**	**(185.91)**	**(56.01)**	**61.38**
Cash Raised from Financing Activities									
Government Contribution	-	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	34.23	15.23	17.64	55.26	124.23	146.24	145.19	78.89	(6.57)
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-
Share Capital	9.62	4.28	4.96	15.53	34.90	41.09	40.79	22.16	-
Net Cash Raised from Financing Activities	**43.84**	**19.50**	**22.60**	**70.79**	**159.13**	**187.33**	**185.98**	**101.05**	**(6.57)**
Changes in Cash Position	**0.38**	**(0.05)**	**(0.33)**	**-**	**-**	**-**	**-**	**-**	**-**
Cash at the Beginning of Year	**-**	**0.38**	**0.33**	**-**	**-**	**-**	**-**	**-**	**-**
Cash at End of Year	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Annex G - X: Projected Cash Flow Statement (FLEXIBLE - 6-Lanes Expressway) Continue…

Toll Road PPP Project: Kibaha to Morogoro PPP Cash Flow Statement Currency & Unit = USD Millions												
Semi-Annual Periods	**30-Jun-28**	**31-Dec-28**	**30-Jun-29**	**31-Dec-29**	**30-Jun-30**	**31-Dec-30**	**30-Jun-31**	**31-Dec-31**	**30-Jun-32**	**31-Dec-32**	**30-Jun-33**	**31-Dec-33**
Flags												
Financial Period	5	6	6	7	7	8	8	9	9	10	10	11
Concession Periods (Half Years)	1	1	1	1	1	1	1	1	1	1	1	1
Concession Months in each Period (Half Years)	6	6	6	6	6	6	6	6	6	6	6	6
Development/ Construction Period	0	0	0	0	0	0	0	0	0	0	0	0
Service Period	1	1	1	1	1	1	1	1	1	1	1	1
Operating Activities												
Profit Before Tax	30.98	34.71	32.89	36.32	34.55	37.86	36.12	39.30	37.45	40.68	40.73	45.43
Adjustment to reconcile PBT to net cash flows												
Non-cash:												
Interest Income (Loan Receivable income recognised)	(66.00)	(66.34)	(66.60)	(66.87)	(67.05)	(67.25)	(67.35)	(67.45)	(67.49)	(67.52)	(69.25)	(71.10)
Interest Expense	37.65	37.43	36.45	36.39	35.39	35.27	34.25	34.08	33.21	32.80	31.72	31.42
Amortisation	-	-	-	-	-	-	-	-	-	-	-	-
Government Contribution	-	-	-	-	-	-	-	-	-	-	-	-
Exchange rate gain/loss on loan revaluation	0.00	(3.08)	0.00	(2.98)	0.00	(2.88)	(0.00)	(2.77)	(0.00)	(2.67)	0.00	(2.55)
Movements in Working Capital												
(Increase) in Accounts Receivable	(2.18)	(4.92)	(4.65)	(4.92)	(4.65)	(4.92)	(4.66)	(4.92)	(4.66)	19.70	22.41	-
Increase in Accounts Payable												
Interest Paid on Senior Debt T1	(37.65)	(37.43)	(36.45)	(36.39)	(35.39)	(35.27)	(34.25)	(34.08)	(33.21)	(32.80)	(31.72)	(31.42)
Interest Paid on Senior Debt T2	-	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Mezz Debt	-	-	-	-	-	-	-	-	-	-	-	-
Interest Paid on Shareholders Loans	-	-	-	-	-	-	-	-	-	-	-	-
Taxation Paid	(1.69)	(3.15)	(2.53)	(3.93)	(3.34)	(4.74)	(4.19)	(5.43)	(4.87)	(6.13)	(5.44)	(6.79)
Vat Paid												
Dividends Paid	(15.16)	(12.82)	(13.74)	(13.97)	(14.85)	(15.12)	(15.96)	(15.91)	(16.75)	(17.24)	(20.54)	(23.31)
Net Cash Generated from Operations	**(54.05)**	**(55.60)**	**(54.62)**	**(56.35)**	**(55.35)**	**(57.06)**	**(56.03)**	**(57.20)**	**(56.33)**	**(33.18)**	**(32.09)**	**(58.33)**
Investment Activities												
Capital Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Facility Cost - ICW	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - At Financial Close	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - During Development	-	-	-	-	-	-	-	-	-	-	-	-
Concessionaire Costs - Service Development	(1.32)	(1.37)	(1.37)	(1.41)	(1.41)	(1.45)	(1.45)	(1.50)	(1.50)	(1.55)	(1.55)	(1.59)
Operating Costs - During Development Period	-	-	-	-	-	-	-	-	-	-	-	-
Operating Costs - During Service Period	(0.95)	(0.98)	(0.98)	(1.01)	(1.01)	(1.05)	(1.05)	(1.62)	(1.62)	(1.67)	(1.67)	(1.72)
Major Maintenance Costs	-	-	-	-	-	-	-	-	-	(24.62)	(24.62)	-
Social Economic Expense	-	-	-	-	-	-	-	-	-	-	-	-
Finance Assets Repaid	63.65	65.20	65.20	66.79	66.79	68.42	68.42	70.10	70.10	71.82	71.82	73.59
Net Cash Utilised in Investing Activities	**61.38**	**62.85**	**62.85**	**64.37**	**64.37**	**65.92**	**65.92**	**66.99**	**66.99**	**43.99**	**43.99**	**70.27**
Cash Raised from Financing Activities												
Government Contribution	-	-	-	-	-	-	-	-	-	-	-	-
RAF Fund	-	-	-	-	-	-	-	-	-	-	-	-
Senior Debt T1 Advanced/ (Repaid)	(7.32)	(7.25)	(8.24)	(8.02)	(9.02)	(8.86)	(9.89)	(9.79)	(10.66)	(10.81)	(11.89)	(11.94)
Senior Debt T2 Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-	-
Mezz Debt Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-	-
Shareholder Loans Advanced/ (Repaid)	-	-	-	-	-	-	-	-	-	-	-	-
Share Capital	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Raised from Financing Activities	**(7.32)**	**(7.25)**	**(8.24)**	**(8.02)**	**(9.02)**	**(8.86)**	**(9.89)**	**(9.79)**	**(10.66)**	**(10.81)**	**(11.89)**	**(11.94)**
Changes in Cash Position	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(0.00)**	**-**	**-**	**0.00**	**-**
Cash at the Beginning of Year	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(0.00)**	**(0.00)**	**(0.00)**	**0.00**
Cash at End of Year	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(0)**	**(0)**	**(0)**	**0**	**0**

ANNEXURE J: LEGAL DUE DILIGENCE REPORT

11.1 Legal Environment

This Chapter reviews both statutory and procedural laws of Tanzania pertaining to the PPP projects, particularly provisions enabling a public body to enter into PPP arrangement. It also review rules and regulations in relations to registration requirement, approvals, permits, licenses and other mandatory procedures. The analysis will ensure that all foreseeable legal requirements are met to enable proper procurement, negotiations and conclusion of a PPP Agreement. The relevant legislations are analyzed below.

11.2 The Executive Agencies Act, CAP 245 (RE 2020)

The Executive Agencies Act is enabling law for the establishment of various Executive Agencies in the country. An Executive Agency is defined under Section 2 of the Executive Agencies Act, CAP 245 (RE 2002) as a semi-autonomous agency of the Government Ministry for the purposes of providing public services. An Agency is normally established by the respective minister by way of an order published in the Government Gazette. Tanzania National Roads Agency (TANROADS), is established under Section 3 of the Act through **the Executive Agencies (Tanzania National Roads Agency) (Establishment) Order GN 293 of 2000**. In 2020 the Establishment Order was amended by the Executive Agencies (The Tanzania National Roads Agency) (Establishment) (Amendment) Order, GN 232 of 2020.

Pursuant to Rule 2.1 of the Order, TANROADS was declared a Road Authority within the meaning of the Highways Act, CAP 169 in respect of the Trunk and Regional roads network in the Tanzania Mainland. By virtue of this law, TANROADS being a road authority is mandated to design, construct, maintain and supervise the designated roads in Mainland Tanzania. Rule 3 (6) of the Order gives TANROADS legal capacity, among other functions, to enter into contracts in its own name, to sue and be sued in contract and upon approval of the Ministry of Works and Transport and upon such terms and conditions as he may specify on general or in any particular case borrow money in its

own name and acquire, hold or dispose of movable and immovable property. The latter capacity is also stipulated in Regulation 18 Part III of Revenue and Expenditure of Executive Agencies (Finance, Procurement and Stores) Regulations, 1999. In upshot, TANROADS as public entity has legal capacity to enter into contracts, including PPP agreements.

11.3 The Roads Act, No. 11 of 2007

The Roads Act, is an act of parliament enacted for providing on the road financing, development, maintenance and management in the country. Under Section 6 (1) of the Roads Act provides that TANROADS as the road authority shall be responsible for development, maintenance and management of public roads and related facilities. The relevant function of TANROADS in relation to PPP is set out in Section 6 (2)(c) of the Act which says;

"(c) *To negotiate concession agreement with private party entities to facilitates financing and development of selected roads in accordance with guidelines prescribed by the minister*"

It is clear from the above cited Rule 2.1 of the Establishment Order and the function inserted in Section 6 (2)(c) of the Roads Act, TANROADS as the road authority has full mandate and capacity to enter into an agreement with private entities to facilitate financing and development of selected roads under the PPP arrangement including the proposed Expressway project.

Further under Regulations 27 and 29 of the Road Management Regulations, 2009, the Minister responsible for roads is empowered to consult minister responsible for land so that he preserves the land reserve for the new expressway road. Thereafter, the Minister shall publish the width of the new public road and issue a Government Notice thereof.

11.4 The Road and Fuel Toll Act, (CAP 220 RE 2022)

This is another piece of legislation relevant to facilitate the operation of the PPP project on the issue of collecting road toll. TANROADS is empowered under Rule 3.3 (h) of the establishing Order to undertake the establishment and operation of toll roads. The

Establishment Order does not specifically confer on TANROADS the ability to levy and collect road tolls, but rather an oversight role. The Road Funds Board is organ tasked with the function of setting out procedures for “agents” with respect to the collection of road tolls for the purposes of the Fund. Reading the Establishment Order in this context, TANROADS is not amongst such appointed “agents”.

Under the Road and Fuel Toll Act, the Commissioner, being the Permanent Secretary to the Treasury is responsible for the administration and collection of road and fuel tolls and can appoint public officers to be toll collectors. Section 11 (2) of the Act provide an exception in terms of which all persons supplying fuel in bulk to a fuel filling station are by law toll collectors in relation to that station.

The issue is that the law does not recognize TANROADS as toll collecting agent, so has no mandate to collect road tolls. As such, it would be necessary to set modality of toll collection or TANROADS be appointed by the Commissioner as a toll collector as contemplated in the Road and Fuel Toll Act. Upon appointment as agent, TANROADS can contractually delegate this function of collecting user charges onto the Private Party in terms of Regulations 21 and 23 of the Road (Financing and Participation of Public Private Partnership) Regulations, G.N 442 of 2013. The Regulations require the charges collected to be deposited in the escrow account, which we propose to be opened with the Bank of Tanzania (BoT) which is a safer place.

11.5 The Government Loans, Guarantees and Grants Act, 1974 (CAP 134).

This Act as amended by Written Laws (Miscellaneous Amendments) Act, 2017 (No. 2 of 2017) and the Finance Act, 2022 (No. 5 of 2022), contains provisions relating to the loans, guarantees by government and acceptance of grants made to the Government and matters connected and incidental thereto. It gives power to the Minister responsible for finance upon the advice of the National Committee to raise from inside or *non-resident sources* loans of such sums as are necessary to defray expenditure upon such terms on interest, repayment or otherwise as may be negotiated.

The relevant Section is 13 (1) of the Act that says;

"(1) *Where the Minister is satisfied that it is in public interest for the Government so to do, the Minister may for and on behalf of the Government guarantee in such conditions as he may think fit, the repayment of the principal money and the repayment of any loan raised either within or from non-resident sources by a parastatal organization or any other body corporate.*

(2) The Government shall conduct risk assessment to borrowers before guarantees are issued."

A *"parastatal organization"* is defined to mean, among others, a local government authority, a body corporate established by or under any Act other than the Companies Act and any company registered under the Companies Act not less than fifty percent of issued share capital of which is owned by the Government or parastatal organization.

The reading of the law is clear that the Minister can guarantee parastatal organization or public company where it owns majority shares but cannot issue guarantee to a private party. The notable impediment is that even for a company registered under the Companies Act (BRELA) as the SPV company will do, the Minister has no legal capacity to guarantee a company unless the Government or parastatal organization own not less than fifty percent of issued share capital of that company.

At this juncture, the SPV company expected to be registered with majority share capital owned by private investor in PPP arrangement, will not qualify to be guaranteed by the Government unless the Government or parastatal organization own not less than fifty percent of issued share capital of the company

11.6 Natural Wealth and Resources Contracts (Review and Re-Negotiation of Unconscionable Terms) Act, 2017

This Act has resolved to fairly and equitably undertake protracted measures to ensure that the natural wealth and resources of the United Republic are used for the greatest benefit and welfare of the People of the United Republic by ensuring that all arrangements or agreements by the Government protect interest of the People and the United Republic

therefore promoting the rights of development and self-determination. Its aim is to protect and safeguard natural wealth and resources.

In respect of dispute resolutions, the Act reiterated that all disputes arising on contractual relationships relating to natural resources must be adjudicated by judicial bodies and organs established in the country

11.7 Public Private Partnership Act, 2018 (CAP 103 RE 2022)

The Parliament enacted the PPP Act, No. 18 of 2010 as amended and revised in 2018 (CAP 103 RE 2018 (The PPP Act) as the specific legislation for PPP projects in Tanzania.

The PPP Act provides for the institutional framework for the implementation of public private partnership agreements between the public sector and private sector entities. It also sets rules, guidelines and procedures governing PPP procurement, development and implementation of public private partnership and other related matters. The main objective is to enable the private sector participate in provision of resources in terms of investment capital or resources, managerial skills and technology in implementing public infrastructure and services.

The Act establishes the PPP Centre and the PPP Steering Committee and their functions under Sections 4 and 7 respectively. Section 18 of the PPP Act, requires a PPP project to be approval by the Public Private Partnership Steering Committee and vetting of contract by the Attorney General before implementation.

Under Section 19 the accounting officer shall ensure that the outsourced activity is efficiently and effectively carried out, the project road is appropriately protected against forfeiture, theft, loss, wastage and misuse and, has adequate control management and monitoring capacity. The Project Officer with appropriate skills and experience from within the contracting authority will be appointed to do adequate contract management, particularly assisting the Accounting Officer to monitor performance of the private party and ensure proper implementation of the agreement.

Furthermore, the Act requires the PPP agreement to provide opportunity for the empowerment of citizens of Tanzania in accordance with the National Economic Empowerment Act, 2004. Likewise, the Act addresses the issue of procurement of private parties and transaction advisors. It creates the requirement for competitive bidding in both solicited and unsolicited projects.

Moreover, under Section 22 inserts the dispute resolution mechanism to the effect that any dispute arising in course of agreement shall;

"(b) *in the case of mediation or arbitration, be adjudicated by judicial bodies or other organs established in the United Republic and in accordance with laws of Tanzania*".

This Section is styled in the spirit of the law relating to natural wealth and resources cited above.

To implement the law, the Minister responsible for finances made **the Public Private Partnership Regulations, 2020** under Section 28. The Regulations indicate the manner in which to identify, enter into agreement, the criteria to choose a project and the right to terminate the PPP contract.

In addition, they provide for the procedure and timeline for conducting concept notes, pre-feasibility and feasibility studies, the procurement process for both solicited and unsolicited bids, identification of proposals, submission and evaluation of expressions of interest, request for proposals, agreement negotiations, small scale PPP projects, monitoring and evaluation of projects and hand-back.

The issue in this law is Section 22 (b) which limits the adjudication of Mediation or Arbitration through organs established in the country, as opposed to the spirit of the Arbitration Act that recognizes both domestic and international arbitration. This might be an impediment likely to lower the investment appetite of foreign investors to the project. It is also difficult for the Private Party to accept such limitation in the dispute settlement mechanism.

11.8 The Arbitration Act, 2020 (CAP 15 RE 2022).

This Act is the basic arbitration law in Tanzania with provisions regarding dispute resolution mechanisms. It aims at obtaining the fair resolution of disputes by an impartial arbitral tribunal without undue delay or unreasonable expense and promote consistency between domestic and international arbitration. It has provisions for enforcement of foreign arbitral Awards.

“Domestic Arbitration” is defined as the arbitration that involves a body corporate incorporated in Mainland Tanzania, or that which its central management and control is exercised in Mainland Tanzania, or a substantial part of its obligation is to be performed in Mainland Tanzania or when the subject matter of the dispute is in Mainland Tanzania.

“International arbitration” is an arbitration relating to disputes arising out of legal relationships where at least one of the parties is a national of country or a body corporate incorporated or whose central management and control is exercised in any country other than the United Republic; or the Government of a foreign country.

The Act establishes a Tanzania Arbitration Centre under section 77.

11.9 The National Economic Empowerment Act, No. 16 of 2004

The Act was established with the aim of promoting and facilitating economic initiatives aimed at empowering Tanzanians and bought into effect the National Economic Empowerment Policy, 2004. The Act establishes the National Economic Empowerment Council (NEEC) which is tasked to develop strategic institutional framework, facilitate economic empowerment and provide guidelines to support planning and coordination of both the sector and multi sector.

Any organization wishing to carry out economic activities in Tanzania must register with this Council, prepare and submit performance reports on economic activities and create employment for women and disadvantaged persons, which is one of national efforts to abide with the Tanzania Development Vision 2025 goals.

11.10 The Public Procurement Act, No. 9 of 2011 (CAP 410 R.E. 2022)

The Act provides a comprehensive coverage of all regulatory aspects critical to public procurement and I applicable to procurements financed by Public funds. The Act sets out a public procurement system which ensures that procurement is conducted in a fair, open, transparent, accountable and competitive manner; to contribute towards the creation of sound economic climate in Tanzania and increase Private sector participation.

The Act establishes the Public Procurement Regulatory Authority (PPRA) in the country. Also, the Act provides for the review and appeal procedures for procurement complaints and can be applicable to the resolution of PPP disputes as well.

Pursuant to the PPA Act, the responsible Minister made the Public Procurement Regulations, 2013 with the Amendment Regulations of 2016. These Regulations elaborate the procedures and timeline for tendering process under different provided types of procurements. They also provide for complaint review and appeal mechanism under Regulations 105 to 107.

11.11 Employment and Labour Relations Act, 2004 (ELRA) and Labour Institutions Act, 2004 (LIA) (CAP 300 R.E. 2022)

These are the main legislations that govern employment matters in Tanzania. The ELRA and its Rules provide, among others, for the rights and obligations of employees and employers, wages, the employment contract, types of leave, holiday, probation, termination procedure and trade unions affairs. The LIA and its subsequent rules provide for the labour dispute mechanism through the mediation and arbitration proceedings. Basically these two laws govern the employer-employee relationships.

The Private partners in this project will be required to comply with the relevant employment legislations in relation to the employees they intend to hire to carry out the construction and management of the PPP project.

11.12 The Contractors Registration Act, No. 17 of 1997

This Act creates the requirement and manner for registration of contractors in Tanzania. It also establishes the Contractors Registration Board (CRB) to regulate the conduct of contractors in the country. In addition, the Act creates restriction on the registration of local contracting firms unless the majority of its shares are owned by the citizens of the United Republic of Tanzania.

11.13 The Engineers Registration Act, 1997 & The Architectures and Quantity Surveyors (Registration) Act, 2010.

It is worth noting that both legislations have mandatory provisions requiring Engineers and Quantity surveyors to register in their respective boards in order to qualify for practicing their professions in the country. Likewise, under the PPP project the Contactor will be required to employ or use the services of qualified engineers and quantity surveyors who are registered with the respective professional boards.

11.14 The Value Added Tax Act, 2014 (CAP 148 RE 2022)

Generally, the Act provides for legal framework for the imposition and collection of administration and management of the Value Added Tax (VAT) and for related matters. The Act further elaborate on issues concerning VAT on imports and supplies, registration for TIN number, place of taxation, returns, payments and refunds in terms of procedures and timelines concerning VAT and its related matters.

11.15 The Income Tax Act, 2004 (CAP 332 RE 2022)

It provides for the charge, assessment and collection of Income Tax, for the ascertainment of the income to be charged and for related matters. The Act covers among others; issues concerning withholding and corporate taxes. It further provides for procedures and timelines concerning Income Tax and its related matters.

11.16 The Finance Act, 2022 (No. 5 of 2022)

This Act imposes and alters certain taxes, duties, levies, fees and amends certain written laws relating to the collection and management of public revenues. The investor is expected to abide with the mentioned taxes under this law as well.

11.17 The Bank of Tanzania Act, 2006

This Act provides for responsive regulatory role of Bank of Tanzania (BoT) in relation to the formulation and implementation of monetary policy, supervision of other Banks and financial institution, exchange rate policy, mortgage financing and deal, hold, and manage gold and foreign exchange reserves of Tanzania,

Under Section 54 states the BoT shall administer any payment agreement entered into by the Government. In Section 67 of the Act, all assets including local and foreign currencies held or deposited or managed by the Bank shall be immune from any enforcement proceeding and no execution, attachment or similar process issued by any court for enforcing payment.

Under this protection of law, money and assets of the Government held or deposited with the BOT are safe and its clients are assured to be paid whenever they require payments. Also will be in line with the Road (Financing and Participation of Public Private Partnership) Regulations, G.N 442 of 2013 which directs that the charges collected to be deposited in the escrow account.

11.18 The Water Resources Management Act 2009

At Section 34 prohibits human activities at a distance of 60 meters from the water dam, reservoir, river or water sources. To obstruct or divert water, a person should seek permit from the respective Basin Water Board per Section 43 of the Act.

11.19 Tanzania Investment Act, 1997

This Act is the main legislation on matters relating to investment in Tanzania. It creates provisions for investment environment in Tanzania and favourable conditions for

investors. It establishes the Tanzania Investment Centre (TIC) an agency of Government which is a one-stop centre for investors.

TIC objective is to co-ordinate, encourage, promote and facilitate investment in Tanzania and to advise the Government on investment policy and related matters. It is vested with the powers to receive applications and issue certificates of incentives and protection as per the law.

Furthermore, the Act stipulates the functions of the TIC, among others, to initiate and support measures that enhance the investment climate in the country for both local and foreign investors, disseminate information about investment opportunities and may assist investors to obtain necessary permits, licenses approvals consents, authorizations, registrations and other matters required by law for a person to set up and operate an investment.

11.20 The Land Act, 1999 (CAP. 113 R.E. 2022) and Regulations of 2001.

The Land Act is the main legislation that governs the classification and tenure of land, administration, disposition of land through sale, lease, mortgages, and rights of occupancy and regularization of interests of land among others. The Act also provides for the contracting authority to dispose of land to another party. Therefore, all matters relating to the disposition of the project land will be governed under the Land Act.

Section 156 of the Act requires compensation to made to affected persons in event the land occupied by an individual is acquired. According to Regulation 13.2 of the Land Regulations of 2001, the Government is required to pay compensation within 6 months of conducting the evaluation of the land.

Other legislations relating to land which should be taken into account are;

(a) The Village Land Act, (CAP 114 RE 2022) regulating management and ownership in relation to land in the jurisdiction of villages.

(b) The Land Acquisition Act, No.47 of 1967(CAP 118 RE 2022). It provides modality for the compulsory acquisition of land for public purposes upon payment of fair and adequate compensation to land owners to be used for construction and reserve.
(c) The Town and Country Planning Ordinance, 1966, Cap. 378.
(d) The National Land Use Planning Act, 2007.
(e) The Township (Building) Rules, G.N. No. 8 of 1953.
(f) The Valuation and Valuers Registration Act, 2016.
(g) The Land Registration Act (Cap 334 R.E. 2022).
(h) The Grave Removal Act, 1969.

11.21 The Mining Act No. 15 of 2010 (CAP 123 RE 2022).

The Act has put mandatory requirement under Section 28 (1) and (3) to apply for primary mining license (PML) for construction materials.

The issue is that some lands along the project road with potential construction materials are owned by individual persons with PML granted under the Act. In event these lands will be acquired or the road be re-aligned, it shall increase compensation costs to acquire or re-aligned the road and ultimately raise project costs. The solution is for TANROADS to protect potential existing borrow pits by renewing the PML and allocate sufficient resources for compensation.

Another issue relates to the requirement of payments of minerals royalties that will, unless waived or exempted, cause unnecessary additional costs.

11.22 The Companies Act, No. 12 of 2002.

This Act governs registration and operation of Public and Private Companies in Tanzania. It should be noted that the Special Purpose Vehicle (SPV) Company to be established shall require prior registration with the Business Registration and Licensing Authority (BRELA).

11.23 The Beekeeping Act No.5 of 2002

Section 17 (i) (g) and (k) of the Act prohibits development activities of erecting any building and Construction of road by any person, other than right holders of license or permit sought from the Director for Beekeeping Matters. Section 26 of the Act provide for the procedure to secure necessary permit for any development project undertaking in beekeeping reserve and after preparation of the EIA and submit it to the Director.

11.24 Other Regulatory legislations

(a) The Environmental Management Act, 2004 and the Environmental Impact Assessment and Audit Regulations 2018 which provide requirement and procedures for conducting Environmental Impact Assessments (EIA).

(b) Workers' Compensation Act 2008 under Pat IV provides for right to compensation for accident or death of workers while on duty and protection, and Section 71 of Part (viii) provides for the obligations of Employer to register to the Director General.

(c) Water Resources Management Act 2009 at Section 34 prohibits human activities at a distance of 60 meters from the water dam, reservoir, river or water sources unless one seek permit from the respective Basin Water Board per Section 43 of the Act.

(d) The Business Licensing Act, No. 25 of 1972.
(e) The Law of Contract Act (CAP 345 RE 2022).
(f) HIV and AIDS Prevention and Control Act 2008.
(g) The Occupational Health and Safety Act, 2003.
(h) The Local Government Finances Act, 1982 (CAP 290 RE 2022).
(i) The Wildlife Conservation Act (CAP 283 RE 2022).
(j) Antiquities Act, 1964.
(k) Energy and Water Utilities Authority Act, 2011.
(l) The Tourism Act, 2008.

(m) National Park Act, 2002.

(n) The LATRA law…

It is important to note that, this is not an exhaustive list of all the laws and regulations to be observed under the PPP Project. Efforts will be in place to observe the entire relevant laws passed by the Government from time to time.

Annex K: Institutional analysis

Consultation with the related Institutions

Ministry of Defence and National Service

- Our access for the field survey at the Ruvu Military Camp had been restrained by the military forces. It was recognized that approved alignment is passing through Military Camp of National Service. To solve the dispute, the consultation with

Ministry of Defence and National Service was conducted and an approval was obtained on 3rd Aug, 2015.

Tanzania People's Defence and Force (TPDF)

- Our access for the field survey at the Ruvu Military Camp had been restrained by the military forces. To solve the dispute, Technical Team (T/T) had conducted consultation with Tanzania People's Defence and Force (TPDF).
- Technical Team adjusted alignment to the boundary of the Camps according to TPDF's request, and continue consultation with TPDF, an approval was obtained on 6th Oct, 2015.

Kibaha Education Center

- Technical Team received request for cooperation from Kibaha Education Center during field survey and had a coordination meeting with Director at Kibaha Education Center.
- According to the coordination meeting, we had revised alignment to the boundary of the their future expansion area.

Open University of Tanzania plot at Bungo

- Technical Team received request for cooperation from Open University of Tanzania plot at Bungo during field survey and had a coordination meeting with civil engineer at Open University HQ.
- According to the coordination meeting, we had revised alignment to the boundary of the future expansion area.

Ministry of Lands, Housing and Human Settlement Development of Chalinze and Morogoro Municipal Council

- After approval of the route from Kibaha to Morogoro, Technical Team conducted several meetings with the Chalinze and Morogoro City Council and agreed that the final decision for the project route will be decided during feasibility study.

Ministry of Finance and Planning

- Technical Team have conducted consultation with MoFP for long period regarding Financing options and Payment Mechanisms.
- Approval of Financing Options and Payment Mechanisms will be pursued during detailed feasibility study stage.

Annexure L: Risk Matrix

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	Design Risk					
DR1	Feasibility Approvals and consents with State responsibility	Financial Close	• Environmental approvals • Procurement approvals • 6 month delay at escalation	Project fails to achieve financial close or delay in achieving financial close.	• Consultation with relevant authorities and interested and affected parties; • Due diligence in respect of environmental sensitivities and early commencement of environmental approval process; • Due diligence, co-operation of local authority;	Total Construction cost
DR 2	Detailed Design approvals and consents	Construction period	Application for detailed building approvals from regulatory authority-may be local or regional authority unless legislation retains consents for State.	Delay in construction commencement or completion causing cost increases and revenue loss 6 month delay + P&G	• Appointment of experienced Contractor and subcontractors; • Contractor due diligence on relevant regulatory authority approval process and requirements; • Fixed price construction contract.	Construction Costs plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
DR 3	Working (Construction) Drawings Delay in final approval of detailed design	Construction period	Drawings required for construction on site are delayed	Delay in construction commencement or completion causing cost increases and revenue loss 3 month delay + P&G	• Experience of Construction Subcontractor; • Analysis of Bidder's construction programme • Fixed price Construction Subcontract • Performance Bonds to cover cost increases.	Construction Cost plus Annual Toll Revenue
DR 4	Changes in design and construction standards during the Construction Period or change in the specifications: Tanroads	Construction period	Change in the specification requiring change in design at the instance of Tanroads.	Delay in construction commencement or completion causing cost increases and increases in costs for revised design. 6 month delay + P&G Unavailability of finance to fund additional	• Ensuring detailed and careful consideration of specification preparation, sign-off by TANROADS of user requirements. • Variation process under PPP Agreement whereby TANROADS compensate the Contractor for the additional cost; and • No Design Change.	Construction Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
				costs		
DR 5	Changes in design and construction standards during the Construction Period: Contractor	Construction period	Change in the specification requiring change in design at the instance of Contractor.	Delay in construction commencement or completion causing cost increases and increases in costs for revised design. Unavailability of finance to fund additional costs 1 month delay + P&G	• Involve Operations Subcontractor in design and require sign-off of design in regard to Output Specifications; • Fixed price contract; and • Variation process under PPP Agreement however no compensation to the Contractor by TANROADS	Construction Cost plus Annual Toll Revenue
DR 6	Failure of the design to meet the specifications	Service Period	Design fails to meet specifications	Services standards not achieved, infrastructure does not achieve life expectancy 2 years additional lifecycle costs	• Appointment of experienced Contractor with reputable Design Team and Construction Subcontractor; and • Regular site inspections by TANROADS; • Termination	Whole Lifecycle Cost
	Site Risk					

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
SR1	Land acquisition within right-of-way	Construction period	Failure to acquire land required for the Project and failure to provide vacant possession to the Contractor	Delay in construction commencement causing cost increases 12 month delay	• Reliance is to be placed on the Tanzanian expropriation process; • TANROADS to appoint a surveyor to commence land identification process ASAP to verify land ownership or servitudes.	Construction Cost plus Annual Toll Revenue
SR 2	Obtaining consent to use additional land (permanent additional right-of-way)	Project Term	Failure to acquire additional land required for the Project and failure to provide vacant possession to the Contractor	Delay in construction commencement causing cost increases 6 month delay	• Reliance is to be placed on the Tanzanian expropriation process; and • Ensure TANROADS expropriate sufficient land.	Annual Lifecycle Cost
SR 3	Obtaining Ministerial or owner consent to use additional land (temporary use of land for	Project Term	Failure to acquire additional land required for the Project and failure to provide vacant possession to the Contractor	Delay in construction commencement causing cost increases 6 month delay	• Due diligence on title deed, SG diagrams and topographic survey; and • Reliance is to be placed on the Tanzanian expropriation process	Annual Lifecycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	construction purposes)					
SR 4	Site access and security: general	Construction period	Control of access to the corridor from local roads or worksites.	Poor access control may lead to construction completion delay and associated cost increases	• Due diligence during Feasibility Study; • Mandatory Site inspection during RFP; and • Contractor to use security during development period.	Construction Cost plus Annual Toll Revenue
SR 5	Site access and security : illegal occupie rs	Project Team	Despite best endeavours of the Contractor to secure the site the site is illegally occupied by third parties (e.g. communities, hawkers, businesses)	Disruption to works and operations, delay in completion of works or maintenance, risk of injury to third parties, inadequate land for the project to operate properly	• Access to be monitored by Contractor • Expropriate of land and related compensation to follow appropriate consultation and processes to make sure community grievances are addressed • GoT to assist	Annual Lifecycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
					in evicting illegal occupiers	
SR 6	Cultural/archaeological/ heritage	Construction period	Cultural/archaeological/ heritage resources identified on site	Suspension in construction works, additional costs to mitigate, delay in construction completion 6 month delay + P&G	• Due diligence to indicate the likelihood of the occurrence on site and Expert advice; • Contractor to demonstrate capacity to deal with associated procedures. • Relief Event. • Requirement from authorities for archaeological expert on site	Construction Cost plus Annual Toll Revenue
SR 7	Environmental, water/air/soil pollution – unknown pre-existing	Construction period	Pre-existing unknown environmental	Additional costs to mitigate, delay in construction completion 3 month	• Reliance on Contractor's expert reports. • Due diligence by TANROADS and Contractor.	Construction Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			issues	dela y Addi tion al cost		
SR 8	Geotechnic al and ground/soil conditions	Project Term	Geotechnical and ground soil conditions which may impact on the design and or construction which are not known.	Failure of infrastructure as a result of adverse geotechnical or ground soil conditions. Potential road closure 6 mon th dela y Addi tion al cost	• Due diligence by TANROADS during Feasibility Study; • Due diligence investigation by Contractor during RFP (geo-tech etc) (Contractor not to rely on TANROADS due diligence); • Construction Subcontractor's design team's PI cover; and • Insurance cover ("landslip cover") to include loss of earnings as a result of failure	Construction Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
SR 9	Undisclosed Known Latent defects (Existing infrastructure)	Project Term	Defects in existing works which fail after site hand over	Additional cost to rectify defects/ increase maintenance costs	• TANROADS disclose all existing infrastructure to Contractor; and • Due diligence by TANROADS and Contractor on existing infrastructure.	Whole Lifecycle Cost
SR 10	Utilities installed along road alignment	Service Period	Utilities regulator fails to restore road correctly after laying/repairing of utilities pipes	Additional maintenance costs, road closure and potential loss of revenue	• Insurance cover ("business interruption") to include loss of earnings; and • Agreement with the state in the PPP agreement to address these issues and indemnify the Contractor against such claims as the utilities companies are functioning under state	Annual Lifecycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
					delegation and are controlled by the state. • ***NOTE: LEGAL ADVISOR TO CONFIRM ROAD ACT IMPOSITION OF RESPONSIBILITY FOR TRAFFIC ACCOMMODATION***	

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	Construction Risk					
CR 1	Achieving Construction Standards and Specifications; Quality assurance and quality control; Failure to build to design	Construction Period	Failure of the contractor to build to design and to achieve construction standards	Additional construction costs; delays in construction completion; additional maintenance costs and revenue loss 6 month delay Additional	• Experienced and reputable designers, detailed brief by Contractor; • Reputable Construction Subcontractor and design team; • Site inspection and Independent Certifier; • Performance bonds to cover cost overruns;	Contract Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
				cost	• Surveys conducted on roads; • Audit of QA system of construction subcontractor; and • Final maintenance bond to be provided by Contractor to cover costs.	
CR 2	Fit for purpose manuals, approvals and statutory certificates	Construction Period	Contractor fails to maintain appropriate manuals and obtain required consents	Delays in completion of construction resulting in additional costs and revenue loss 1 month delay	• Experienced and reputable Construction Subcontractor; and • Audit of QA system of construction subcontractor.	Construction Cost plus Annual Toll Revenue
CR 3	Cost overrun not caused by a relief or compensation event or force majeure	Construction Period	Cost overruns caused by factors manageable by the contractor	Cost overruns. Contractor does not have enough revenue to complete the project	• Fixed price Subcontracts; • Experience of Contractor; • Due diligence on proposal of Contractor; and • Performance bonds	Construction Cost
CR 4	Delays caused by agencies other than Tanroads (e.g. utilities)	Construction Period	Construction commencement delayed or continuation held up as a result of another agency	Completion delay and cost overruns 3 month delay	• TANROADS to facilitate engagement with other agencies and possibly indemnify the Contractor against delays. • Contractor to carry the	Construction Cost plus Annual Toll

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
					initial delay period	Revenue
CR 5	Delays caused by Tanroads failure to perform	Construction Period	Construction commencement delayed or continuation held up by Tanroads failure to perform its obligations	Completion delay and cost overruns 3 month delay	• Indemnify Contractor against losses by TANROADS non performance	Construction Cost plus Annual Toll Revenue
			Events (other than Relief Events, Compensation Events and Force Majeure) causing a delay in construction completion. Specific Risks :		• Experienced and reputable Construction Subcontractor; • Budget for float in construction	

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
CR 6	Completion delay risk: contractor	Construction Period	• inclement weather; • poor tender documents/ inaccurate construction programme; • lack of communication; • Contractor variations; • labour unrest within Construction Subcontractor; • late supply of materials; • change in management and staff of contractor or Construction Subcontractor; • poor transfer of skills; • theft and/or damage to equipment; (save by negligence of contractor); • poor Project planning; • commissioning of equipment not successfully completed; • disputes with Subcontractors and/ or default by Subcontractors; • failure to meet human resources labour relations requirements by	Completion delay and cost overruns 12 month delay	programme; • Insurance (“Project Delay”); • Performance bonds to Lenders; • Fixed price Construction Subcontract; • Identify during design any unusual/ special materials required and possible alternatives; • Identify any unconventional construction methods required and provide for in construction programme; and • Risk for inclement weather to be specified as a Contractor risk under the PPP agreement.	Construction Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			Contractor and/or Subcontractors (to minimum statutory requirement); • failure to obtain approvals; • illegal occupiers on Site; • subsidence or landslip.			

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
CR 7	Time and costs to satisfy commissioning: non-performance by Independent Engineer	Construction Period	Independent Engineer fails to perform duties reasonably causing a delay in commissioning or failure to commission	Completion delay and cost overruns 3 month delay	• Appointment of reputable Independent Certifier; • Can appoint substitute Independent Certifier; • Damage clause against Independent Certifier (liability may be limited); and • Independent Certifier joint appointment by Contractor and TANROADS and joint responsibility for payment.	Construction Cost plus Annual Toll Revenue
CR 8	Damage to works, however caused except as excluded	Construction Period	Damage to works not covered by compensation or relief event	Completion delay and cost overruns 1 month delay	• Insurance cover for damage to works	Construction Cost plus Annual Toll Revenue
CR 9	Damage/injury to third parties	Construction Period	Injury to third parties or damage to third party assets	Completion delay and cost overruns	• Indemnity from Contractor for third party claims; • Insurance ("lateral support"); and • Insurance cover ("Professional	Construction Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
					Indemnity").	
CR 10	Damage/loss to utilities identified by Tanroads/ Utility Companies	Construction Period	Damage to utilities identified by Tanroads or Utility Companies	Completion delay and cost overruns to rectify – consequential loss/ damages claims by third parties	• Indemnify the Contractor for damage caused other than Contractor; and • Indemnity from Contractor for third party claims.	Construction Cost plus Annual Toll Revenue
CR 11	Unknown utilities	Construction Period	Unidentified services and/ or unexpected complications for services caused by external utilities service providers.	Increased construction costs. Delay in construction completion. Unidentified services (electrical, telecoms, water and sewer) are unearthed and service disruption results. Alternatively there are unexpected complications when disconnecting,	• Contractor to conclude SLA with relevant authority; • Insurance cover for loss of revenue; and • Public Liability cover for damage to 3rd party assets.	Construction Cost plus Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
				moving and re installing the services. 1 month delay + reinstatement cost		
CR 12	Adequacy of insurance	Construction Period	Insurance insufficient to cover potential claims	Contractor does not have sufficient funds to cover a claim or to rectify damage	Minimum insurance requirements set out in PPP Agreement; Due diligence that insurances are in place as at Financial Close; Contractor bears the risk of any insurance being unavailable due to Contractor's conduct; and Policy to include obligation on underwriter/broker to notify TANROADS in event that insurance cancelled or lapses without	Construction Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
					replacement.	
CR 13	Latent defects (New infrastructure and disclosed defects with existing infrastructure)	Service Period	Failures in infrastructure presenting after the defects period	Additional cost to repair defects, road closures and potential loss of revenue	• Experienced and reputable Construction Subcontractor; • Performance Bond to cover cost; • Audit of QA system of construction subcontractor; and • Regular construction site inspections; and • Due diligence on disclosed defects with existing infrastructure.	Construction Cost
CR 14	Environmental risks after hand over –	Construction	Environmental contamination on site	Additional costs required	• Insurance ("public liability" policy), • reputable Construction	Construction

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	known pre-existing or arising from work	Period	(new or known existing)	to mitigate and completion delay	Subcontractor and Operations Subcontractor, • indemnity from Contractor.	Cost
CR 15	Defective materials	Project Term	Infrastructure failure as a result of defective materials	Additional cost to repair defects, road closures and potential loss of revenue	• Experienced and reputable Construction Subcontractor; • Performance bonds to Lenders; • Fixed price Construction Subcontract; • Identify during design any unusual/ special materials required and possible alternatives and • Use of reputable materials supplier.	Construction Cost plus Annual Traffic Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
CR 16	Workplace Health and Safety	Construction Period	Failure to comply with health and safety standards	Completion delay and cost overruns 1 month delay	• Appointment of reputable and experienced Construction Subcontractor and appointment by contractor of safety trained staff; and • TANROADS to enforce use of Health and Safety Officer by Construction Subcontractor.	Construction Cost plus Annual Traffic Revenue
CR 17	Relief Events: Development Period		Usually an event as follows: • certain unusually adverse weather conditions; • fire, explosion; • utility failure by relevant authority; • accidental loss/damage to head office; • failure /shortage of power or water;	Contractor has time to remedy and bears cost. Cost mitigated by insurance where there is an indemnifiable event. 3 month delay + additional cost	• Insurance cover ("construction all risks", riot and civil unrest and "business interruption"); • Planning; • Management; and • Clear communication of implications of TANROADS municipal service requirements.	Construction Cost plus Annual Traffic Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			• blockade / embargo (not being a force majeure event) • discovery of unanticipated fossils and antiquities; • certain industrial action (of a general nature)			
	Operating Risks					
OR 1	Revenue Risk - commercial	Service Period	Risk that forecast traffic revenue is not achieved. Specific risks: • Lower than expected traffic volume; • different traffic mix;	Revenue insufficient to cover operating costs and costs of serving debt which may ultimately lead to default under the loan agreements	• Updated traffic model; • Traffic counts to support model; • Due Diligence by Contractor; • Toll strategy designed to minimise diversion; and • Performance bond.	Annual Toll Revenue

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			• technology failure; • bad debts, poor collections, toll avoidance;			
OR 2	Revenue Risk - regulatory	Service Period	Toll tariff promulgated by GoT is less than the toll tariff as set out in the concession agreement	Revenue insufficient to cover operating costs and costs of serving debt which may ultimately lead to default under the loan agreements	• TANROADS to carry share of revenue risks by subsidy for shortfall in revenue.	Annual Toll Revenue
OR 3	Availability of road	Service Period	Road not available due to road closure (foreseen or unforeseen) but excluding closure due to extended civil protest against tolling	Loss of revenue	• Regular maintenance of road; and • Random site inspections.	Annual Toll Revenue
OR 4	Obsolescence	Service Period	Equipment or technology used becomes prematurely	Poor maintenance or systems operation leading to increased operating costs in order to replace early	• Regular maintenance of equipment; • Include maintenance reserve account; and • Regular equipment inspections	Life Cycle Costs

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			obsolescent	than anticipated		
OR 5	Expansion for traffic accommodation at ramps and interchanges due to traffic growth, or signalization	Service Period	Expansion or upgrading of existing interchanges or ramps to accommodate additional traffic	Additional capital costs to be incurred Expansion horizon brought forward	• Updated traffic study support additional revenue; and • TANROADS to financially assist Contractor for additional capital costs.	Construction Cost
OR 6	Expansion for traffic accommodation: additional lanes and interchanges	Service Period	Construction of additional lanes or construction of new interchanges or ramps to accommodate additional traffic	Additional capital costs to be incurred Expansion horizon brought forward	• Updated traffic study support additional revenue; and • TANROADS to financially assist Contractor for additional capital costs.	Construction Cost
OR 7	Changes in maintenance standards during the Service Period or change in the specifications:	Service Period	Change in the specification requiring change in operations at the instance of Tanroads.	Additional lifecycle and maintenance costs to be incurred	• Ensuring detailed and careful consideration of specification preparation, sign-off by TANROADS of maintenance standards; • Variation process under PPP Agreement whereby TANROADS compensate the Contractor for the additional cost; and	Life Cycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	Tanroads				• No Change in specifications.	

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
OR 8	Changes in maintenance standards during the Service Period or change in the specifications: Contractor	Service Period	Change in the specification requiring change in operations at the instance of Contractor.	Additional lifecycle and maintenance costs to be incurred	• Involve Operations Subcontractor in consideration of specifications and require sign-off of maintenance standards in regard to Output Specifications; and • Variation process under PPP Agreement however no compensation to the Contractor by TANROADS	Life Cycle Cost
OR 9	Maintenance risks	Service Period	Failure to maintain roads, bridge and other structures to the required standard, traffic volume greater than anticipated,	Additional lifecycle and maintenance costs to be incurred to rectify backlog, reduced life expectancy	• Regular maintenance of road; • Include maintenance reserve account; and • Regular equipment inspections by TANROADS; and • Appointment of	Life Cycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			risk of materials or labour not being available		maintenance surveyor.	
OR 10	Overloading	Service Period	Damage to the road caused by vehicles exceeding maximum weight in the design specifications. Includes risks of change in legal load limit	Additional lifecycle and maintenance costs to be incurred to rectify backlog, reduced life expectancy	• Include maintenance reserve account. • Tanroads to enforce overloading policy and Contractor to monitor	Whole Life Cycle Cost
OR 11	Environmental risks after construction completion	Service Period	Environmental contamination on site (new or known existing) after service commencement	Additional costs required to mitigate and reinstate	• Insurance ("public liability" policy), reputable Construction Subcontractor and Operations Subcontractor, indemnity from Contractor; • Contractor appointment of environmental officer; and • Contractor submission of EMP.	Life Cycle Cost
OR 12	Handover condition	End of Concession	The road and infrastructure is not in the	Additional costs to rectify the road	• Final concession assets survey; and • Final maintenance bond.	Construction Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
			required condition at completion of the concession			
OR 13	Workplace Health and Safety	Service Period	Failure to comply with health and safety standards	Cost overruns	• Appointment of reputable and experienced Construction Subcontractor and appointment by contractor of safety trained staff; and • Contractor appointment of Health and Safety Officer.	Life Cycle Cost
OR 14	Damage: Concession assets by Contractor	Service Period	Damage to Concession assets by Contractor, including inappropriate use of Concession assets	Cost to rectify	• Insurance cover ("assets all risks").	Construction Cost
OR 15	Injury/ damage: person or property by Contractor	Service Period	Loss or injury to person or property by Contractor	Damages claim/ cost to rectify	• Insurance cover ("public liability").	Construction Cost
OR 16	Damage: Concession assets by	Service Perio	Damage to Concession assets by Tanroads or	Cost to rectify	• Staff education and training (TANROADS to verify staff trained as condition for opening);	Construction Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	Tanroads or government agency	d	government agency negligence		and • Insurance cover (“assets all risks”).	
OR 17	Injury/ damage: person or property by Tanroads or government agency	Service Period	Loss or injury to person or property by Tanroads or government agency negligence	Damages claim/ cost to rectify	• Staff education and training • Insurance cover (“public liability”)	Construction Cost
OR 18	Obtaining and maintaining licenses to comply with regulatory requirements	Service Period	Contractor fails to maintain appropriate licenses and obtain required consents	Additional costs, penalties, suspension of operations	• Experienced and reputable Operations Subcontractor; • Clearly defined requirements by TANROADS; • Contractor event of default; and • TANROADS Step-in in the case of health or safety concerns.	Life Cycle Cost
OR 19	Incorrect estimates and cost overruns	Service Period	Actual operating and maintenance costs higher than anticipated	Cost overruns which may not be covered by revenue – may lead to termination	• Fixed price Subcontracts. • Experience of Contractor; • Due diligence on proposal of Contractor; and • Performance bonds.	Life Cycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
OR 20	Relief Event: Service Period	Service Period	Usually an event as follows: • certain unusually adverse weather conditions; • Fire, explosion; • utility failure by relevant authority; • accidental loss/damage to head office; • failure /shortage of power; • blockade / embargo (not being a force majeure event) • certain industrial action (of a general nature)	Contractor has time to remedy and bears cost (but cost mitigated by insurance)	• Insurance cover ("assets all risks", riot, civil unrest and "business interruption" (based on increased cost of workings)); and • Project Management.	Life Cycle Cost

OR 21	Adequacy of insurance	Service Period	Insurance insufficient to cover potential claims	Contractor does not have sufficient funds to cover a claim or to rectify damage	• Reputable insurance advisor. • Review of minimum insurances on an annual basis. • Deduction of insurance proceeds (or proceeds that would have been received but for uninsurability) from termination payment.	Lifecycle Cost
	Financing Risks					
FR 1	Interest rate fluctuation; pre financial close	Financial Close	Fluctuation in interest rates period to financial close	Base rates or margins increase prior to financial close impacting on project viability	• Fixed interest rate funding; and • Bidders to indicate hedging policy in bids.	Debt
FR 2	Interest rate fluctuation; post financial close	Debt Term	Fluctuation in interest rates after financial close	Interest rate fluctuations impact negatively on the ability to service the debt which may lead to default.	• Fixed interest rate funding.	Debt
FR 3	Exchange rate fluctuation; pre financial close	Financial Close	Fluctuation in exchange rates period to financial close	Exchange rates increase prior to financial close impacting on project viability	• Hedging instruments used by Contractor; • Contractor manages exposure and secures contract price in local currency; and • Limit exposure to imported elements.	Whole Lifecycle Cost

FR 4	Exchange rate fluctuation; post financial close	Project Term	Fluctuation in exchange rates after financial close	Increase in whole lifecycle costs or mismatch in currency of funding and currency of whole lifecycle costs resulting in foreign exchange losses impacting negatively on viability which may lead to default	• Foreign currency denominated • Unitary Payment	Whole Lifecycle Cost
FR 5	Refinancing	Project Term	Restructure financing to reduce financing costs burden on Private Party and reduce the Unitary Payment.	TIB as the MLA cannot arrange the funding to refinance the facilities, GoT will need to arrange the funding or the Project will potentially go to Termination under Government Default.	• Managed by TIB and GoT as part of the debt arranging process • Have contingency plans to fund the Project provided that TIB is not successful to arrange the funding	O/S Debt
FR 6	Inflation	Project Term	Increase in prices	Cost increases in excess of the budget increases which constrain ability to operate and maintain or to finance construction costs	• Fixed price contracts; link toll tariffs to inflation. • Unitary Payment linked to inflation	Costed under CR3 + PR19

FR 7	Financial Model Error	Project Term	Error in the contractors financial model	Projects on which the project is financed are not accurate and the project fails	• Model audit, lender due diligence.	Whole Lifecycle Cost
FR 8	Change in Ownership of Concessionaire	Project Term	Change in Shareholder which results in weakening of financial standing and/or support of Concessionaire.	Concessionaire performance compromised	• Regular reporting by the Contractor to TANROADS; • Access to financial records of Contractor; and • Consent required for changes in shareholding; provided that any de facto Change in Control shall require the TANROADS consent.	Market Value

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	Legal Risk					
LR 1	Authority	Project Term	Tanroads not authorised to enter into the PPP Agreement, either by virtue of : • inability to motivate that PPP is a function in support of an institutional function; • competing regulatory framework assigns authority to another organ of state	Invalid PPP agreement. Unlawful administrative act. Failure of Project.	• Due diligence to ensure proper authority on part of executing authority.	Market Value

			• failure to obtain required approvals; • signatory not authorised to enter into PPP Agreement.			
LR 2	Change in Law (not unforeseeable conduct)	Project Term	A general change in law which impacts negatively on the contractor	Additional costs associated with compliance with the law	• Contractor to use best endeavours to fund at agreed rate of return; and • Sliding scale for sharing additional capital expenditure cost.	Construction Cost
LR 3	Tax Changes	Project Term	Tax changes in respect of assets or Project, including changes in VAT, Income Tax, dividends taxes and capital gains tax, withholding tax	Increased cost burden on the project or reduction in shareholder returns or interest paid to financiers	• Margin in Contractor returns to absorb change. • GoT to create a more certain tax regime for toll roads and may have to share some of this risk	Life Cycle Cost

LR 4	Unforeseeable Conduct: Contract cannot continue	Project Term	An unforeseeable conduct event occurs which materially adversely affects Contractor and as a result of this the Contractor is not able to continue with the project (examples of causes additional cost of compliance with the law may be too large to fit within funding structure, the project may illegal to continue operating as a result of the law change, etc)	Termination for TANROADS Default	• Strict definition of what constitutes Unforeseeable Conduct; and • Remedy period plus negotiation period.	Market Value
LR 5	Unforeseeable Conduct: Contract can continue	Project Term	A change in law which discriminates against PPPs in general or Contractor in particular – but not rendering performance of contract illegal or impossible	Compensation to contractor	• TANROADS to provide compensation to the Contractor for any losses, additional costs or damages incurred.	Whole Lifecycle Cost
LR 6	Termination for corrupt gifts and payments	Project Term	Contractor or Lenders offer corrupt gifts and/or payment to Government officials prior to award of tender	Termination	• Can replace the offending contracting Contractor without termination of PPP Agreement; and • Reputation risk of Contractor and Subcontractors.	Retendering Cost

LR 7	Force Majeure: contract continues	Project Term	A force majeure occurs, being: • war, civil war, armed conflicts or terrorism • nuclear contamination • chemical or biological contamination not resulting in termination.	Contractor relief from performance obligations to extent of Force Majeure	• Obligation to perform insofar as possible; • Obligation to mitigate; and • Insurance cover ("assets policy", "business interruption policy" and civil unrest, riot) to the extent that there is material damage to the Facilities.	Life Cycle Cost
LR 8	Force Majeure: contract terminates	Project Term	Termination due to an event of Force Majeure which persists.	Termination	• Event should persist for a period of longer than 180 days.	Construction Cost
LR 9	Contractor does not pay subcontractor timeously and legal disputes between parties	Project Term	Failure by the Contractor to pay a Subcontractor and disputes between parties, where such default or dispute is not as a result of Tanroads default	Additional costs; delays in services provision or construction completion	• Major Subcontractors who are shareholders in Contractor are unlikely to cause or permit Contractor to default; • Contemplated to constitute an event of default under the Financing Agreements; and • Potential Lenders Step-in.	Whole Lifecycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
LR 10	Conditions precedent	Before financial close	Conditions precedent are not fulfilled, and the Agreement does not come into force	Project does not go ahead. Procurement costs lost. Loss of efficiencies.	• Limit the number of CP's and manage issues proactively.	Retendering Cost
LR 11	Contractor non-compliance with contract obligations (excluding provision of services/ works)	Project Term	Contractor does not comply with general obligations: • reporting • indemnities • undertaking not to act as Tanroad's agent • limitation on cession and delegation • financing	Poor performance by contractor, cost over runs	• To be managed under and in terms of the PPP Agreement by prescribing contractual and accounting reporting required; • All orders placed by Contractor are without liability to TANROADS; • Contractor to indemnify the TANROADS against such claims; • Consent can be obtained from TANROADS for cessions and delegations; and • Damages claim against	Whole Lifecycle Cost

					Contractor.	
LR 12	Contractor default: material non-compliance/ breach/ abandonment	Project Term	Breach of a material term of the contract leading to contractor default. Specific Risks : • contractor insolvency; • failure to complete construction and commission before long stop date • contractor abandons project	Termination	• Management under the PPP Agreement; • Obtain guarantees; • Financial soundness of Contractor to be checked through appropriate and regular reporting; • Remedy period (to be determined in the PPP Agreement); • Materiality level; and • Step in rights.	O/S debt + Market Value
LR 13	Tanroads default	Project Term	Breach of a material term of the contract leading to Tanroads default. Specific Risks : • failure to make payments that are	Termination	• Remedy Period.	O/S debt + Market Value

			due and payable; • expropriation of contractor			
LR 14	Compensation event: General	Project Term	Failure by Tanroads to comply with its obligations to the extent not caused by or contributed to by Contractor (includes extended civil protest against tolling and wholesale non-payment of tolls and any damage to assets during such action)	Tanroads to compensate Contractor for losses incurred	• Management by Contractor.	Whole Lifecycle Cost
LR 15	Compensation Event: competing road	Project Term	The Tanroads and/or another Responsible Authority introduces a road or alternative means of transport after the commencement of the Project Term which competes directly with the Project and results in revenue loss to the contractor	Tanroads to compensate Contractor for lost revenue	• Compensation by TANROADS to Contractor for loss in earnings; and • Extensive studies relating to demand, prior to implementing competing road.	Annual Toll Revenue

LR 16	Legal disputes between Tanroads and contractor	Project Term	Arbitration and legal proceeding between Tanroads and Contractor	Costs of dispute procedure	• Threat of litigation or arbitration; and • Appointment of a mutually agreed adjudicator at the time of signature of PPP agreement for an agreed duration as a first tier dispute resolution method.	Whole Lifecycle Cost
LR 17	Legal challenges from 3rd parties	Project Term	Legal challenges from 3rd parties	Costs of dispute procedure plus damages	• Appropriate insurance	Whole Lifecycle Cost
LR 18	Legal disputes between contractor and its subcontractors	Project Term	Arbitration and legal proceeding between Contractor and subcontractor	Costs of dispute procedure	• Appointment of reputable and experienced Contractor and subcontractors with experience in working together; and • Appropriate allocation of risk between parties.	Whole Lifecycle Cost

	Risk	Applicable Period	Description	Consequence	Mitigation Measure	Cost driver
	Contract management					

CM 1	Contract management risks	Project Term	Management of multiple contractors and design team members on a complex infrastructure project. Management of interface between construction and operations contractors	Cost overruns, completion delay, construction failures	• Procure the project through a PPP process and pass the risk over to the Contractor.	Whole Lifecycle Cost

SENSITIVITY TESTS

Sensitivity Tests carried out based on the applicability of the pavement type, operation of the SGR and possibility of considering six (6) lanes instead of the duly opted four (4) lanes expressway indicates the following:

Rigid Pavement Scenario

The projected traffic loading along Kibaha – Morogoro road, ranges from of 121 million to 321milions based on the forecast traffic for 25 years (Year 2022 - 2046) based on the Feasibility Study Report for the Dar es Salaam – Chalinze Expressway (2016), which exceeds the maximum range (20- 50 million) specified in the Tanzania Pavement and Materials Design Manual 1999, i.e. >TLC50 and for the AASHTO standards i.e. >TLC 80, hence rigid pavement should be used.

Increased Number of Lanes Scenario

The number of lanes has been selected based on the forecast traffic for 25 years (Year 2022 - 2046), Average service time (required to collect fee) and Average waiting vehicles. The traffic volume is estimated for the base year 2022 to 2046, and the annual average growth rate is 3.30%.

The volume is 54,264veh/day, according to the Dar – Chalinze expressway PPP Feasibility Study, (2016) and 4 lanes were considered suitable for this section. Considering Six (6) lanes, will significantly increase the project CAPEX which will be economically unjustifiable as the forecasted traffic will remain the same level during the concession period of 25 years or may be less when considering operationalization of the SGR.

Possibility of reducing traffic with the coming SGR and flights by 40-50% may significantly change the proposal from rigid to flexible pavements thou there are many risks of using Flexible pavements over Rigid pavement in terms of Maintenance and Lifespan

Maintenance and Lifespan

Cost for Routine maintenance and Periodic Maintenance of flexible pavement is higher than Rigid pavements under the same conditions. When placing rigid pavements, it might not require frequently major maintenance or full Rehabilitations while Flexible pavements may require major Maintenance or Rehabilitations before and after its life span depending on to loading effects and other weather conditions and this will disrupt traffic flow and affect revenue collections.

Rigid Pavement is more feasible than Flexible Pavement in long service life, this is since the cost of flexible pavement increases for some years after constructions. Life span for rigid pavements can go up 35years while flexible pavements is only 20yrs which will require full rehabilitation before end of concession period.