

# NORTHERN CORRIDOR ROADSIDE STATIONS PROGRAM

## REGIONAL GUIDELINES

## TABLE OF CONTENT

FOREWORD.....	5
<b>1. INTRODUCTION.....</b>	<b>7</b>
1.1 Background.....	7
1.2 Rationale.....	8
1.3 RSS best practices throughout the world.....	10
1.3.1 RSS concept in Japan.....	10
1.3.2 USA model.....	11
1.3.3 The concept in the UK.....	11
<b>2. DESIGN ELEMENTS AND TECHNICAL SPECIFICATIONS.....</b>	<b>12</b>
2.1 Models/Types of RSS.....	12
2.1.1 Large RSS Model Design.....	12
2.1.2 Medium RSS Model Design.....	13
2.1.3 Small RSS Model Design.....	13
2.2 Minimum design features and facilities.....	15
2.3 Site selection, location and minimum land requirement.....	16
2.3.1 Site selection.....	16
2.3.2 Land requirements.....	18
2.3.3 Positioning and location.....	18



2.3.4	Standard designs.....	20
3.	<b>POLICY AND REGULATORY FRAMEWORK.....</b>	<b>21</b>
3.1	Policy framework for highway development/ International Trade Corridors.....	21
3.2	Harmonization of standards for RSS.....	21
3.3	Charter on RSS and self-regulatory mechanisms.....	22
3.4	Financing mechanism.....	22
3.4.1	Private Sector Financing-model.....	22
3.4.2	Public Private Partnership-model.....	22
3.4.3	Government funded facility.....	23
3.5	National Operatios Manual.....	23
4	<b>OPERATION AND MAINTENANCE.....</b>	<b>24</b>
4.1	Environmental management.....	24
4.2	Social dimensions management.....	25
4.3	Repairs and maintenance.....	25
4.4	Security.....	25
5.	<b>IMPLEMENTATION, INSTITUTION FRAMEWORK AND COORDINATION.....</b>	<b>26</b>
5.1	Coordination Agencies.....	26
5.2	Role of NCTTCA.....	26
5.3	Formation and Role of multidisciplinary Task Force.....	27
5.4	Key stakeholders.....	28
5.5	Reference documents.....	29



## TABLE OF FIGURES

Figure 1:	Large RSS model.....	12
Figure 2:	Medium RSS model.....	13
Figure 3:	Small RSS model.....	14
Figure 4:	RSS Site Selection decision making process.....	17
Figure 5:	RSS Site Position compared to the highway .....	19



## FOREWORD

The Northern Corridor Transit and transport Coordination Authority embarked on the program of turning the corridor into an Economic Development Corridor by harnessing all the economic potential aimed at creating forward and backward economic development linkages between key sectors with Transport infrastructure Development.

The program for development of Road Side Stations facilities along the transport corridor is underpinned by the Northern Corridor Infrastructure Master Plan, the Northern Corridor Spatial Development Program and the Port Charter that was recently launched by Head of State of Republic of Kenya.

The RSS initiative is based on international best experiences of providing services and facilities for motorists and travelers along major highways. It also draws experience from the Michinoeki model of Road Side Infrastructure Facilities and Services which have been successfully implemented in Japan.

A fully implemented RSS will not only provide for rest stops especially for Cargo trucks aimed at reducing driver fatigue, will provide secure parking yards and will be used by other motorists as refreshing stops.

In addition the rest stops will be used to address social economic dimensions in cross border trade including Road safety and Health related issues. It is therefore recommended that wellness centers to address cross cutting social dimensions be established alongside the RSS.

RSS will encourage also local communities will take advantage to establish markets for their produce and eliminate accidents caused by traders who cross haphazardly the highways to sell their products to motorists.

As we look to develop the RRS facilities there is need to create a strong Public and private partnership. The Transport Corridor in collaboration with our Member States, will seek to streamline institutional and policy frameworks aimed at creating partnership with the private sector to develop the RSS.

I therefore urge the Member States to refer on this regional guidelines to customize detailed national operations manual and implementation framework aiming at creating a strong partnership between public and private sector in developing and operating these RSS facilities.

***DONAT M. BAGULA***

***NCTTCA Executive Secretary***

# 1. INTRODUCTION

## 1.1 Background

The Northern Corridor Transit and Transport Coordination Authority (NCTTCA) comprising Burundi, DR Congo, Kenya, Rwanda, South Sudan and Uganda was established to promote co-operative transit and transport arrangements with a view to foster an efficient and cost effective transit system along the Northern Corridor (NC). The NC, which links the signatory states to the port of Mombasa in Kenya, is the most important trade route among the five key corridors designated by the EAC as critical to its development agenda.

NCTTCA in its efforts to facilitate trade and transport as well as turn the Corridor into a smart Corridor, initiated a project aimed at establishing Roadside Stations (RSSs) along the Northern Corridor (NC).

The RSS programme is to enhance road safety and health along the NC using the RSSs as a launch pad. Other benefits include better health, safety and security for communities along the Northern Corridor and enhanced protection of the environment. A feasibility Study was carried out to assess all the project aspects. NCTTCA also prepared the Project Investment Papers (PIPs) that packs information for the RSS projects for marketing to prospective Private Investors.

The NCTTCA in collaboration with the Ministry of Transport and Infrastructure- Kenya organized an Investors' Conference in the first Quarter of 2015 that put together stakeholders from both private sector and public sector of the all NC Member States and donors.



The conference came up with resolutions towards implementation of the RSS program, whereby the Member States of Northern Corridor with the view of having smart and seamless transport corridors committed to:

- Develop Roadside Stations as an integral part of Transport Infrastructure Services along the Northern Corridor;
- Develop Policies and Regulatory Frameworks for promoting Roadside Station in partnership with the Private Sector.

The investors' conference also recommended the following:

- Formation of Task Forces of multi-sectoral institutions to spearhead the implementation of RSS project
- Member States to come up with specific Policy guidelines for attracting Investment in RSS.

Therefore the development of RSS along highways and related transport infrastructure services in partnership with private sector aims at addressing the following challenges;

- Issues of road safety and Health;
- Promote Socio-economic development;
- Employment creation;
  - Security of cargo;
  - Organized parking, minor repairs and maintenance;
  - Promote road side markets;





- Information updates for road users; as well as
- promoting spatial development

## 1.2 Rationale

The Road Side Stations (RSS) are meant to address driver fatigue, enhance road safety and provide health facilities for travelers along the Northern Corridor and other Highways. The establishment of Roadside Stations comes as an added value to all the Northern Corridor Member States' efforts in curbing the loss of lives and cargo. Other benefits include socio-economic development and income generation for local communities trading along the corridor.

The lack of adequate facilities for rest and recovery, for maintenance, for parking and sanitation have had a serious effect on drivers using the Corridor and has resulted in high incidences of cross border HIV and AIDs, the prevalence of prostitution and exposure of cargo to robbery due to lack of secured parking areas.

Road accidents have also been a problem due to lack of resting facilities and designated areas to undertake minor urgent maintenance of vehicles. The RSS will help to address these challenges including minimizing environmental impacts arising from ground contamination caused by haphazard disposal of waste.

It is expected that, by allowing long distance drivers to have breaks at appropriate intervals and at suitable/secure facilities, a network of well-designed RSS will eliminate driver fatigue and improve security and health for crews, long distance passengers and cargo. This will reduce road accidents and loss of lives and cargo.



RSS will also reduce transit time through improved travel speeds, better planning and more effective control over drivers' practices by truck owners (limiting unnecessary stops and rationalizing the stop time at each RSS). In future it will be pertinent that public agencies' controls be carried out at only designated RSS (as opposed to current check points), further time savings would be realized. Surrounding communities will also get their share of benefits through improved safety and health as well as increased income from well organized community markets and employment/business opportunities generated at RSS.

Once established, the RSS will not only see the establishment of areas to provide rest places, restaurants, health facilities to address fatigue, road safety and health challenges but will also be used as trade centres for the local communities along the highways to sell their produce, arts and crafts. These unique infrastructure will addresses social issues and directly benefits local communities along the transport corridors.

### 1.3 RSS best practices throughout the world

The RSS have been developed in a number of countries in Europe, the United States, Japan and Pakistan among others. Here below are some of the concepts developed around the world:

#### 1.3.1 RSS concept in Japan

In Japan, the roadside service stations are known as Michinoeki. They are designed and developed with the help of local communities. They combine highway rest area facilities with business services from the local communities who sell their



products, get medical services, education, and training and conduct cultural activities hence creating connection between them and travelers and empower them economically.

### **1.3.2 USA model**

In the USA, rest areas are typically non-commercial, hence services are provided at a minimal fee as they are maintained and funded by the Department of Transportation of the state government. They have a minimum of parking areas, washrooms with shower facilities, vending machines and vehicle service bays. In addition to these others have access to Internet services, recreation facilities, video games.

### **1.3.3 The concept in the UK**

In the UK, RSS are known as motorway service areas or stations. They are owned by the Department of Transport and let out on 50 years leases to private operating companies. Services provided are similar to those offered in most rest station in the US.



## 2. DESIGN ELEMENTS AND TECHNICAL SPECIFICATIONS

### 2.1 Models/types of RSS

The dimension of the RSS design models has been determined based on traffic and other economic factors (financial model). Hence based on this full dimensioning three standard model designs are proposed namely, Large, Medium and Small RSS.

#### 2.1.1 Large RSS Model Design

Figure 1: Large RSS model



## 2.1.2 Medium RSS Model Design

Figure 2: Medium RSS model



### 2.1.3 Small RSS Model Design

Figure 3: Small RSS model



## 2.2 Minimum design features and facilities

RSSs will have minimum facilities for each category of RSS specified in the RSS study. These facilities will support drivers and travelers resting and rejuvenation; vehicles condition; and development of local communities. Some minimum services are to be implemented as follows:

- Toilets: It is considered essential that all roadside stations have toilets.
- Restaurants: Virtually all the roadside station will have a restaurant area, even if it is small in some cases.
- Shops/Supermarkets: RSSs will have an area for shopping.
- Health clinics/Wellness and Emergency response centres: Improving the sanitary conditions along the corridor is a fundamental objective in the implementation of the present roadside stations programme. So, it is proposed to have a Health Clinic every 3 roadside stations at most.
- Bank/Bureau office: Either a bank or a bureau office is proposed in virtually all roadside stations so that users can conduct their business and even transfer money.
- Car workshop: In stations where cars are expected to stop, it is proposed to locate a small workshop for mechanical repairs.



- Cleaning of trucks: It is proposed to introduce a truck cleaning services.
- Hotel: A fundamental objective of the roadside stations is that they should allow drivers to rest, preventing conditions of fatigue which can increase the danger of driving and the number of accidents.
- Petrol station: It is considered essential that all roadside stations should have a petrol station.
- Recreational area or Community centres/Administrative offices: some roadside stations will have a recreational areas to benefit local communities.
- Security services: Roadside will have a specific area designated for providing security services.

## 2.3 Site selection, location and minimum land requirement

### 2.3.1 Site selection

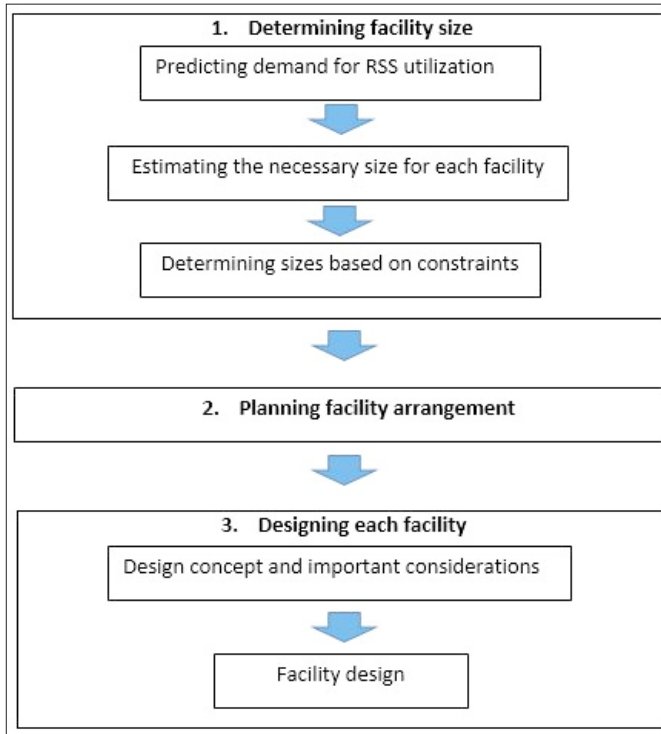
The size of the facilities must be decided on the basis of demand and the required facilities at a particular RSS. If site constraints place any restrictions on the design or ideal size of the facilities it may be necessary to consider several options such as increasing facility size, reducing the number of facilities.





The figure 4 below shows the decision making process in regard to scale and design based on prevailing conditions in each Member State.

*Figure 4: RSS Site Selection decision making process*



### 2.3.2 Land requirements

The following standard land size requirements are proposed:

- Large RSS will have a minimum of 6 hectares
- Medium RSS will be constructed on at least 4.5 hectares
- Small RSS will be located on minimum of 3 hectares

For a fully privately owned RSS investment, private investors will provide their own land.

In the case of a Public Private Partnership, the public entity may provide land then the private investor build and operate the facility.

For public funded RSSs, the Government will provide land required for establishment of RSS. The Government will plan and regulate the land use within the RSS and create a development controlled buffer zone.

### 2.3.3 Positioning and location

The criterion for positioning a RSS is the requirement of drivers considering the driving times and the consequent needs for parking spaces to rest.

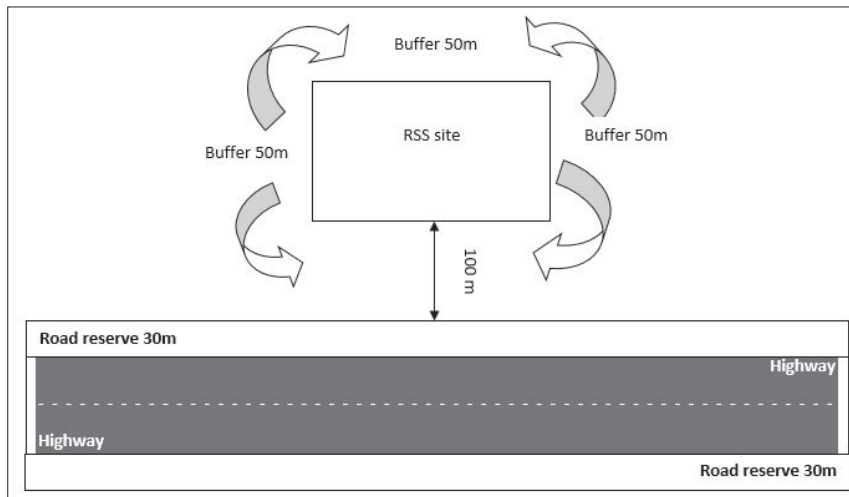


For motorists especially cargo trucks the maximum driving time proposed before resting is estimated at 4.5 hours. The criteria for driving time is considering the distance travelled at an average speed of 50 km/h.

It is proposed that the RSSs along the highways are alternated on both sides of the road to provide adequate resting options for travelers in both directions. They shall be located outside of the road reserve along the National Highway. It is advisable that the RSS be constructed within a development controlled buffer zone of 100m from the edge of the road reserve and at 50m either side of the boundaries of the RSS must be maintained. However each Member State can define its specific country tailored guide on suitable buffer zone putting in consideration the need to avoid highway traffic congestion and other safety issues.

The sketch below illustrates the schematic of the positioning of the RSS adjacent the National highway.

*Figure 5: RSS Site Position compared to the highway*



### 2.3.4 Standard Designs

The RSSs are expected to have minimum standards that provide for the following:

- Drainage – Foul and Surface
- Security and fencing,
- Signage,
- Road marking,
- Street lighting and furniture

The Government is to ensure adequate and convenient accessibility to the proposed and / or existing RSS taking cognizance of the safety of the users.

All designs should meet minimum regional design standards, manuals and specifications.

Road Safety Audits must be undertaken and Health and Safety, accessibility and inclusiveness are to be taken into account in the design, construction and maintenance of the RSS and related infrastructure.

The Government shall provide access to power from the National Grid. The RSS are to provide an alternative automatic back up power to ensure uninterrupted power supply such as solar energy or other green sources of power. The Government shall



ensure that the highway in the vicinity of the RSS is supplied with automatic power backup to ensure safety and security at the RSS.

The Government shall provide access to adequate potable water. All RSS are to have potable water to ensure regular and available clean supply to the RSS.

The RSS facility must have telecommunication facilities, Pedestrian and vehicle circulation, Accessibility.

### **3. POLICY AND REGULATORY FRAMEWORK**

#### **3.1 Policy framework for highway development/ International Trade corridors**

It proposed that the policy framework for highway development in the Member States take RSSs as an integral part of the Transport Infrastructure Services along International Trade Corridors and regional road network. It is also recommended that all Member States incorporate the concept of RSS in the Road Design Manuals, Engineering Designs and Feasibility Studies.

#### **3.2 Harmonization of standards for RSS**

The National Operations Manual should be aligned on the Northern Corridor General Guidelines where general standards have been provided. All Member States prescribing to these general guidelines will ensure consistency and regional standardization of RSSs operation.



### 3.3 Charter on RSS and self-regulatory mechanisms

Key stakeholders in the transport sector should establish a self-regulatory charter committing to promote the highest ethical standards on the use of the RSSs with the aim of promoting health, safety and mitigating fatigue along the Northern Corridor route.

### 3.4 Financing Mechanism

Based on Cost-Benefit analysis the following business models are recommended.

#### 3.4.1 Private Sector Financing-model

Under this model the private sector is expected to acquire land, finance, design, build, own and operate the facility. The government will specify the minimum required design standards and regulatory framework.

#### 3.4.2 Public Private Partnership-model

Under this arrangement the government will provide land and specify the minimum required design standards and regulatory framework, while the private sector will finance and develop the facility, operate and then transfer after an agreed period of time. The private sector firm will run the facility up to specified number of years until it reverts back to the Government.



The risk management will be allocated according to the negotiation between parties in each Country. This will also take in account the general principles of PPP implementation within each Country.

### 3.4.3 Government funded facility

Although these facilities may not be commercially viable they are socially necessary to improve road safety, health and provision of other social amenities. The government will acquire land, construct the facility and may lease out to private sector players to operate and maintain.

## 3.5 National Operations Manual

Each Country shall come up with specific guidelines and framework for implementing RSS program along its highways. The Manual should include but not limited to the following:

- Policy statement
- Legal and institutional framework
- Business model and financing mechanisms
- Marketing, operation and maintenance
- Stakeholders engagement, roles and consultation
- Infrastructure utilities and services



- Land acquisition matters
- Quality assurance, designs and standards
- Social and environmental management standards and practices
- Control, M&E mechanisms

## 4. OPERATION AND MAINTENANCE

### 4.1 Environmental management

The development, operation and maintenance of RSSs should ensure an environmental friendly management practices. The national Guidelines should have specific mitigation measures and actions aimed at addressing social and environmental dimensions.

Main environmental and social impacts to manage for RSSs can be divided as follows: Air quality; Noise pollution; Waste water management; Solid waste generation; Waste oil management; Fuel storage and refilling; Leakage of fuel tanks; Water save; Electricity usage; Landscaping; Soil contamination.

RSS's operation has to be in full compliance with national environmental regulations and site specific conditions of authorization. The RSS's operation has to set self-imposed responsible standards where laws and regulations do not exist.





## 4.2 Social dimensions management

The national manual should ensure that specific social issues are addressed through the inclusion of specific mitigate measures, actions and rules during the RSS's operation.

Key social issues to consider in RSSs development and operation are as follows:

Increase of local incomes and community empowerment (trading, markets, employment, ..); Health care, HIV/STD and other diseases; Increase of security; Gender, youth and disadvantaged population.

## 4.3 Repairs and maintenance

Facilities must be maintain in good condition ensuring the health and safety of users. Government shall put in place minimum standards of health, hygiene and security.

The RSS national operations manual should in conformity to the national rules and regulations on construction and maintenance.

## 4.4 Security

Governments shall ensure that RSSs are safe and facilities are secured to enable users to rest without fear of security risks to person and / or goods.



Minimum security measures may include 24hr CCTV surveillance system and qualified security personnel to be present at all the RSS.

## 5. IMPLEMENTATION, INSTITUTIONAL FRAMEWORK AND COORDINATION

### 5.1 Coordination Agencies

At National level, Member States shall designate National Coordinating Agencies to manage the implementation process of the RSSs.

### 5.2 Role of NCTTCA

At Regional level, the Northern Corridor Transit and Transport Coordination Authority shall be responsible of the overall coordination and overseeing observance of regional standards of RSSs.

NCTTCA will play the role of overall advice, coordination of establishment of RSS in Member States and ensuring regional standards. It will also assist Member states in mobilizing investments.



### 5.3 Formation and Role of multidisciplinary Task Force

Member States shall form multidisciplinary Task Forces for guiding the implementation of their respective RSSs.

The Task Forces shall include the following Government institutions and agencies;

- Ministries of Transport and Infrastructure - playing the role of formulating policy and regulatory framework
- National Transport and Safety Authorities - enhancing road safety, regulating and monitoring operations of RSS.
- National Treasury - Financing and offering PPP advisory services
- Ministries of Health - Playing the role of formulating policy guidelines for the health facilities.
- Ministries of Land, Housing and Urban development - advising on land matters, facilitate land acquisition, leasing and general guidelines on land matters.
- National Highways Authorities - provision of Infrastructure facilities, access roads and land where it is available.
- National Police Service - Enforcement of all relevant laws.
- National Investment Authorities - promotion of private investment in RSS
- Attorney General Office - advice and support on legal matters.



## 5.4 Key stakeholders

The following non-government stakeholders are involved in the development of the RSS program:

- The RSS Operator to ensure the provision of all the minimum services and adherence to ethical behavior as prescribed in the guidelines for the development and operationalization of the RSS.
- The various users of the RSS namely; local communities, local leaders, drivers, vehicle owners and traders are to be sensitized on the purpose, importance and location of the various RSSs.
- Prospective private investors are to be given adequate information pertaining to the development of the RSSs by the lead Government Agency.
- The various associations and Unions are to be sensitized on the purpose, importance and location of the various RSSs.



## 5.5 Reference Documents

During the development, operation, maintenance, marketing, M&E, the following documents and sources of information may act to complement these Guidelines:

- Northern Corridor Policy Organs resolutions
- Study on Establishment of Roadside Stations along the Northern Corridor, Final report volume 1 & 2, 2014
- Study on Improvement of Road Safety and Health through Road Side Station Services along the Northern Corridor, Final Report Volume 1&2, September 2014
- RSS Project Information Papers (PIP), 2014
- RSS Regional Investors' conference Outcomes, April 2015
- RSS Regional Investors' Conference brochure
- RSS website, [www.roadsidestations.org](http://www.roadsidestations.org)





Northern Corridor  
Transit and Transport  
Co-ordination Authority



1196 Links Road, Nyali, Mombasa-Kenya



P.o.Box 34068-80118  
Mombasa, Kenya



Email  
ttca@ttcanc.org



Telefax  
+ 254 41 4470735



Phone  
+ 254 41 4470734  
+254 729 923574



Web  
www.ttcanc.org



@NorthernCorridor



NorthernCorridor

[www.roadsidestations.org](http://www.roadsidestations.org)