

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF ROADS AND PUBLIC WORKS  
MINISTRY OF LOCAL GOVERNMENT  
THE REPUBLIC OF KENYA

**THE STUDY  
ON  
MASTER PLAN  
FOR  
URBAN TRANSPORT  
IN  
THE NAIROBI METROPOLITAN AREA  
IN  
THE REPUBLIC OF KENYA**

**FINAL REPORT**

**APPENDIX  
(VOLUME I)**

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## APPENDIX 2 NATIONAL DEVELOPMENT POLICY AND PLAN

### 2.1 EXTRACT OF NAIROBI METROPOLITAN GROWTH STRATEGY, 1973

#### (1) Nairobi Metropolitan Growth Strategy, 1973

##### Direction of Urbanization

- The regional strategy involves the expansion of Nairobi to the west and to north-east along the axis of the Thika Road and, at the same time, the encouragement of growth of Thika, Athi River and Machakos.
- It is reasonable to anticipate that, given a continuation of growth, Nairobi and Thika may eventually fall within the same metropolitan area, and it is necessary to formulate a strategy which could accommodate such an eventuality.

##### Corridor Development

- Expansion of the city along a corridor of development does give flexibility to react to changing growth rates and other pressures, and ensures a measure of adaptability which is not inherent in a more concentric form of development.

##### Formation of District Cores

- Other than Thika, Athi River, and Machakos, three other towns in the region (Kiambu, Kikuyu and Limuru), although relatively small, will probably become increasingly important as service centres for their rural areas, and also likely to develop local industries.

##### Distribution of Industrial Functions

- Apart from central Industrial Area, industrial lands would be made available at Wilson Airport, Dagorettie, Karen-Langata, Dandora, Kasarani, and both north and south of Ruiru.
- Many of the low- and middle-income housing districts would be served by small local industrial areas.
- Service centres would be located in relation to their potential catchments areas, but sitting on main roads and bus routes would also allow for the attraction of passing trade.
- For the present study, the Central Area was defined as the land bounded by the railway, Uhuru Highway and Nairobi River.

##### Distribution of Housing Areas

- There is a considerable amount of space in and around the existing built-up area

which will be developed.

- Care should be taken in the future not to allow low income housing developments to become too concentrated, to have them interspersed with higher income districts and provide some high income areas to be located in the trade area of each secondary shopping centre.
- Associated with each of the main areas of new housing would be one or more industrial areas and a large commercial centre.
- The major areas for development would be Dagorettie, Karen-Langata, the Eastern Area and the areas outside the north-eastern city boundary around Ruiru.
- There will be a substantial growth of population within the western shamba areas outside the city limits, which is likely to be of a more informal nature.

#### Distribution of Population

- It was concluded that the recommended strategy should not seek to impose higher residential densities merely in order to decrease the cost of the transport infrastructure. Instead, the city should have the option over the long term to create housing areas that answered the environmental demands and financial capability of the inhabitants. The distribution of population is given in Table 2.1-1.

**TABLE 2.1-1 DISTRIBUTION OF POPULATION**

Area	Population (2000)	Remarks
Old City	556,000	125 ha of Eastleigh Airport were excluded from possible usable land. Employment in Central Area is estimated at 100,000 in 2000.
Ruaraka	387,000	Housing areas for low- and middle-income households
Spring Valley	127,000	Housing area development for high-income households Retaining of coffee plantation with large capacity for employment
Karen-Langata	383,000	Retaining housing area for high-income households despite the population density increase
Dagorettie	500,000	- ditto -
Eastern Sector	240,000	Housing areas for low- and middle-income households
Western Shamba Area	250,000	Outside of Nairobi City Conserving agricultural land to the north Ribbon type new housing area development from existing settlement
Ruiru	557,000	Outside of Nairobi City Containing low- to high-density housing areas

## **(2) Land Use Plan of Nairobi City**

The Study Area comprises Nairobi City and parts of adjoining Thika, Kiambu, Machakos, and Kajiado Districts.

Thika District contains 6 administrative areas (Divisions). Out of those administrative areas, total area or a part of Thika Municipality, Kakuzi, and Ruiru are included in the Study Area.

Thika County Council, Thika Municipal Council, and Ruiru Municipal Council are the local authorities within the Study Area.

Kiambu District contains 7 administrative areas (Divisions). Out of those administrative areas, total area or a part of Kiambu, Kiambaa, Limuru, Githunguri, and Kikuyu are included in the Study Area. Kiambu County Council, Kiambu Municipal Council, Kikuyu Town Council, and Limuru Municipal Council are the local authorities within the Study Area.

Machakos District contains 11 administrative areas (Divisions). Out of those administrative areas, Athi River, Kangundo and Matungulu are included in the Study Area. Mavoko Municipal Council and Kangundo Town Council are the local authorities within the Study Area.

Kajiado District contains 6 administrative areas (Divisions). Out of those administrative areas, a part of Ngong and Central are included in the Study Area. Ngong Town Council and Kajiado County Council are the local authorities within the Study Area.

Since the target year of “Nairobi Metropolitan Growth Strategy” prepared in 1973 is year 2000, currently no authorized comprehensive master plan to rely on. Lack of the comprehensive master plan that will give clear directions for development aggravates the abuse of land.

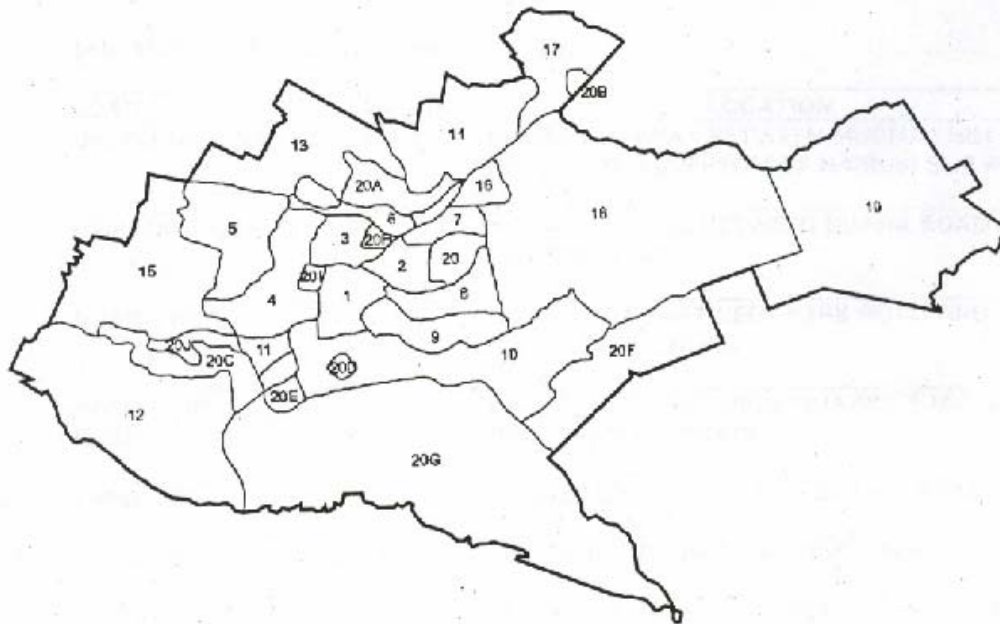
Land use regulation concerning land use zoning, plot ratios/ coverages and plot size was prepared in 1979, which, in reality, is a constraint for private sector development. Table 2.1-2 shows plot ratio / coverages and the lowering of the permitted minimum plot sizes by zone. Figure 2.1-1 shows the zoning for land use and plot ratio / coverage in Nairobi city.



**TABLE 2.1-2 RATIONALISATION OF PLOT RATIOS / COVERAGES AND THE LOWERING OF THE PERMITTED MINIMUM PLOT SIZES**

Zones current land use	Proposed land use	Existing min plot size (ha)	Proposed min plot size (ha)	Prop. PR.	Max. permissic Cov.	Notes
1A Commercial	Commercial	0.05	0.04	2.00-6.00	0.80	High-rise flats:PR=1.0, GC=0.35
Residential	Residential	0.1		2.00		
Light industry	Light industr	0.4		2.00		
1E Offices	Commercial	0.1	0.04	2.00	0.80	High-rise flats:PR=1.0, GC=0.35
Residential	Offices	0.2				
	Residential					
2 Commercial	Commercial	0.05	0.04	2.00	0.80	Flats not allowed.
Residential	Residential	0.04		0.75	0.35	
3 Residential	Residential	0.1	0.1	0.75	0.35	Flats and maisonettes allowed; where there is no sewer PR=GC=25% (septic tank) or 20%(conserv. tank)
4 ditto	ditto	0.1	0.1	0.75	0.35	ditto but no advertising
5 ditto	ditto	0.3	0.2	0.75	0.35	ditto as No.3 no flats but maisonettes allowed.
6 ditto	ditto	0.4	0.2	0.75	0.50	ditto
		0.3				
7 ditto	ditto	0.4	0.04	0.75	0.50	Special scheduled area (Mathare)
		0.08	(on sewer)			
8 ditto	ditto	0.04	0.04	0.75	0.50	Special scheduled area (Eastlands)
9 Industrial	Industrial	0.04	0.04	3.00	0.80	Ancillary use to occupy a max. of 20% of the total permitted plinth.
10 Residential	Residential	0.04	0.04	0.75	0.35	Comprehensive scheme will be allowed with a max.density of 35 units per ha.
			(on sewer)			
11 ditto	ditto	0.04	0.04	0.75		Special scheduled area (Kibera)
			(on sewer)			
12 ditto	ditto	1.0	1.0	-	-	One unit per plot permitted; flats and Maisonettes not allowed; adequate wholesome water to be supplied (Karen/Langata) adequate wholesome water required.
		2.0				
13 ditto	ditto	2.0	0.2	-	-	Where there is no sewer PR=GC=25% (septic tank) or 20% (conserv. tank), one unit per plot permitted.
		1.0				
		0.2				
14 ditto	ditto	2.0	0.2	0.75	0.35	One unit per plot permitted; adequate water supply required.
		1.0				
		0.2				
15 Agricultural Residential	Residential	0.1ha Township	0.1 Township	0.75	0.50	PR=GC=0.25(Septik tank) PR=GC=0.20 (Conser. tank) Terrace houses allowed. Adequate water supply necessary (Dogaretti) (Special density area)
			0.04 (on sewer)			
16 Agricultural Residential Industrial	Residential Industrial	1.0	0.2	0.75	0.35	Adequate water supply required (Ruaraka).
				2.00	0.80	
17 Agricultural	Residential		0.04	0.75	0.50	Where there is o sewer, min. plotsize=0.1ha Special scedul area (Kahawa/Kasarani)
			(on sewer)			
18 ditto	ditto			0.75	0.50	Where there is o sewer, min. plot size=0.1ha Special scedul area (East of Embakasi Airport)
			(on sewer)			
19 Agricultural	Agricultural		2.0	0.75	0.50	Special densty area (Eastern extension)
	Reidential		0.1			35 units per plot allowed.
			0.05(on sewer)			
20 Public	Public	-	-	-	-	Forest, Game forest, Defence areas, etc.

Source: Nairobi City Council, 1979



**FIGURE 2.1-1 LAND USE AND PLOT RATIOS/COVERAGES ZONING IN NAIROBI CITY**

## **2.2 SYNOPSIS OF RECOMMENDATION ON INTEGRATED NATIONAL TRANSPORT POLICY**

### **2.2.1 Kenya Transportation Policy and Roads Sub-sector Policy and Strategy**

This study was carried out by KRB and EDF for preparation of coordinating policy papers of road subsector for GOK and donor communities in March 2004. These identified issues of NMT, urban planning and urbanisation, and transport management and congestion established the principal policies and strategies of overall road-subsector, which of environment are, however, lacked. The JICA Study will review and adopt the policies and strategies to meet the Study objectives.

The policy and strategy for the road subsector will produce realistic and achievable work through the following programming, design standards, and implementation.

## a. Programming

Priority Objectives:

- To reduce the overall combined maintenance cost of infrastructure and vehicle operating costs by: (i) giving first funding priority to roads in maintainable condition, and; (ii) reducing backlog maintenance and rehabilitation needs;
- Road agencies will produce realistic and achievable annual work programmes, with work prioritised against agreed criteria;
- All programmes will ensure that routine and periodic maintenance is planned for all maintainable roads; and
- Road users will be informed of the condition of roads so as to raise awareness of the importance of road maintenance.

Strategies:

- Road agencies will produce realistic and achievable work annual programme, prioritised according to agreed criteria. All programmes will provide for the routine maintenance of maintainable roads.
- KRB will only finance road works programme against agreed criteria that are submitted by road agencies in accordance with schedules that reflect cash-flow constrains;
- KRB will audit programmes produced by agencies to ensure programmes are met and criteria adhered to;
- KRB will launch a public information campaign on road maintenance; and
- KRB will prepare a 5-year rolling investment plan for road maintenance and rehabilitation.

## b. Design Standard

Policy Objectives:

- Ensure road user needs are satisfied through application of appropriate levels of service;
- Ensure that roads are designed to reduce accidents, improve operational efficiency, minimizes social degradation, mitigate environmental impacts, through the application of appropriate design standards;
- Ensure design standards are harmonised with those in the region (especially for international corridors);
- Ensure standards allow benefits from technical advances to be realised; and
- Ensure that design standards adequately cater NMT and pedestrians.

Strategies:

- Revise standard and specifications for all road classes to incorporate technological advances, execution of using both equipment and labour-based methods, where appropriate, and ensuring coherence with regional standards for international routes;
- Trial new technique and materials to establish potential benefits, and review standards regularly;
- Ensure standards comply with environmental requirement;
- Ensure compliance with standards (especially with safety requirements) before projects commence;
- Develop more appropriate ( and safe) traffic calming and other safety standards;
- Ensure roads reserve widths are well defined and documented; and
- Raise awareness of highway design engineers to the needs of road users.

## c. Implementation

Policy Objectives:

- Planning works in liaison with interested parties to ensure coordination and delivery of activities in a timely manner;
- Procuring works in an manner that makes the most cost-effective and appropriate choice between force account and contracting, and between equipment and labour-based methods;
- Developing and maximising use of local resources and labour-based methods to promote wealth creation and poverty alleviation;
- Using full cost accounting practice in force account units so they can operate on an commercial and transparent basis;
- Enduring effective contract management, supervision and prompt payment of contractors to achieve timely delivery of contracts;
- Promoting professionalism in the construction industry by strengthening institutions responsible for regulation, encouraging private sector and human resource development, and establishing sustainable funding for training;
- Using forms of procurement and contract that are appropriate for the works being undertaken;
- Adopting the Roads 2000 strategy for maintenance, where appropriate; and
- Ensuring that measures are taken to minimise potential negative environmental impacts of roads works during implementation.

Strategies:

- Interest parties shall be consulted during the project planning process;
- Performance-based contract shall be introduced for road maintenance;
- Criteria and guidelines shall be developed for each type of work to facilitate effective contract management, and these will incorporate environmental and labour-protection mechanism;
- Appropriate procurement documents and procedures shall be developed for different types of contract;
- Appropriate forms of contract shall be developed for each type of work to facilitate effective contract management, and these will incorporate environmental labour-protection mechanisms;
- Performance indicators shall be established that measure the local resource content in each contract;
- Road agencies shall submit accounts for force account units that reflect the full cost of works carried out;
- Contract agencies shall submit account for force account units that reflect the full cost of works to be carried out;
- Contract management shall be improved by streamlining reporting, supervision and payment procedures and by introducing performance indicators to monitor effectiveness of agencies in implementation, including time for payment of contractors;
- Use of the private sector in the supervision of road works contracts shall be increased;
- Skills development in the industry will be promoted through sponsorship of seminars and training programmes;
- The Government will facilitate the formation of representative associations of contractors and consultants in the industry; and
- Transparency in procurement will be increased, with widespread advertising procurement notice and tender results in the media.

## 2.3 OUTLINES OF ROAD DEVELOPMENT STUDIES AND PLANS

### 2.3.1 A Part of Nairobi Metropolitan Growth Strategy (1973)

The City Council of Nairobi and United Nation prepared Nairobi Metropolitan Growth Strategy in 1973. The general outline of the report was presented in Section 2.2. The proposed road network are as follows.

#### Design Objectives

- To provide a system capable of meeting maximum demands for trips by all modes at the end of the century at reasonable level of services;
- To design the system to embody maximum flexibility, so that it may easily be extended or adopted to cater for alternative or subsequent development;
- To design and operate a system such that maximum efficiency is achieved by providing for maximum trip making at minimum cost, while minimising damage to the environment.

#### Design Criteria

- Maximise the use of existing transportation infrastructure.
- In adding to the existing road network, attempt to create a directional grid system rather than a ring and radial system.
- Promote lineal growth, rather than radial growth, to maximise the use of new facilities provided and make the most efficient use of possible mass transportation system.
- Minimise walk distance from residential and industrial areas to major transit routes, by careful land use planning, so limiting the need for feeder bus services.

The recommendations for road network improvement are summarized in Figure 2.3-1.



a. 1979

b. 1985

**FIGURE 2.3-1 RECOMMENDED TRANSPORTATION NETWORK**

### **2.3.2 The Nairobi Bypass Construction Project, Feasibility Study and its Detailed Design Study (1988/1992)**

The Feasibility study was carried out by MOTC and JICA in 1988 and the detailed design study for the route of Southern Bypass was carried out in September 1992. The purpose of the feasibility study is to divert through traffic on A104 and traffic on the other roads to the Bypass and to solve the traffic congestion in the main streets of Nairobi. Proposed route is a corridor from Mombasa Road to Naivasha Road passing the area between and Kenya Nairobi National Park and a part of Ngong Road Forest, in the southern part of Nairobi. But implementation of the project has been suspended due to environmental problem and land acquisition. In 2003, the Southern Bypass construction is planned in the scope of the Northern Corridor Transport Improvement Project. However, this study did not include Environmental Impact Analysis (EIA), and mitigation measures of negative environmental impact, therefore comprehensive EIA is recommended.

### **2.3.3 Actions Towards a Better Nairobi, Report And Recommendations of the Nairobi City Convention (1993): Road**

Nairobi City Convention prepared this report in cooperation with the Friedrich Naumann Foundation in 1993. The plan became the basic plan for KUTIP's long-term study, and followed by the proposal of MRPWH, MOLG and NCC.

This study Identified transport and road problems in the City; (a) Potholes on all major roads; (b) Moonscape-like craters in the Industrial area; (c) Broken pavements; (d) Gaping manholes; (e) Monumental traffic jams at peak hours; (f) Increasing air pollution; (g) Broken down sewers and inadequate storm water drainage; (h) Non-functioning traffic signals; (i) Broken down street lighting; and (j) Hooliganism of the matatu drivers

The above situations has come about largely as a result of: (i) Neglect or ineffective preventive maintenance of the city road network by the City Commission; (ii) Inadequate investment and lack of improvements to the capacity of the road transportation infrastructure despite the rapid rate of population growth and increased vehicle population in the city; (iii) Failures in the management of the traffic system; (iv) Encroachment on public facilities, mainly parking plots which have been illegally allocated for private development with disregard for the public demand for such spaces; (v) Breakdown in the discipline of all road users arising from the cynicism engendered by the collapse on the planning and law enforcement agencies; (vi) Failure to implement various planning recommendations dating back 20 years – over politicization of the City government has resulted in little or no maintenance of professional standards in the city management; (vii) Lack of long-term vision

about the growth needs for enlarged Nairobi Metropolitan Area to service the needs of Nairobians beyond the year 2000; and (viii) Inadequacies of the rail system and the inappropriately located aviation facilities in the city. These problems and the causes are still take place to date.

The Study recommended the approaches to solve the above problems; (a) The need to create a friendly and safe transportation system; (b) The need to provide an efficient transportation system; (c) The need to ensure a transportation system that is attractive, accessible and affordable for all Nairobians; (d) Special attention are the needs of the disabled and other vulnerable group such as school children and the urban poor who have to walk to work. Following the approaches the study proposed an Action Plan such as (A) Immediate (B) Medium and (C) Long-Terms action plans.

#### A. Immediate Action Plan

A-1 Action to increase the efficiency of the existing transport network through improved traffic management

- Traffic Management
- Public transport
- Taxis
- Pedestrian traffic
- Other non-motorized transport: Bicycle
- Traffic-free pedestrian shopping/Tourist malls
- Other actions to enhance safety and reduce traffic congestion
- Maintenance of the transport network
- Car parks

A-2 Action to increase the capacity of the transport system

- Widening existing road arteries.
- Improving critical junctions / interchanges
- Converting all major roads to dual carriageway
- Building key missing links in the network.

#### B. Medium Term Actions

B-1 Take action to review/update/reappraise existing plans/proposals for major improvements to the existing network with a view to implementing whatever is economically feasible. Most important is filling the gaps in the links in the present system and taking steps to increase capacity use while undertaking those capital works which could enhance the efficiency of the present network.

B-2 Take action to create /build key CBD bypass, especially the north/south bypasses.

B-3 Initiate cost benefit analyses for the medium-term proposals for capital developments.

B-4 Start work on a master plan of the city beyond the year 2000, taking into account the need to lay out the growth pattern of the transportation system, and its proper integration with the planning and zoning requirements for a truly metropolitan city of the 21st Century.

## C. Long Term Actions

- C-1 Action to secure land for an outer Nairobi Metropolitan beltway system, a major dual carriageway to link Nairobi with key surrounding towns like Athi River, Machakos, Thika, Limuru, Ngong, Kiserian, Kitengela and Kikuyu.
- C-2 Preparation of an adopted roadwork programme to produce a given length of tarred roads in residential areas every year on a continuous basis.
- C-3 Development of alternative transport systems based on results of studies currently underway or already done. Focus on alternative design concepts of Rapid Light Rail Transport, and an integrated Mass Transit Network, along the lines examined based on the proposal.
- C-4 Decentralisation of some of the administrative and business activities away from the CBD to reduce congestion in the inner city. Such a move should, however, be well planned to avoid the “Westlands Phenomenon” where development had taken place in the hope of escaping the City centre congestion only to create worse congestion at Westlands as a result of poor planning.

The Study picked up the following roads to be targeted:

- a. Existing and Proposed Dual Carriageways
1. Langata Road      Uhuru Highway to Magadi Road
  2. Ngong Road      Kenyatta Avenue to Dagoretti Corner
  3. Lusaka Road      Uhuru Highway to Enterprise Road
  4. Enterprise Road    Isiolo Road to Mombasa Road
  5. Likoni Road      Jogoo Road to Enterprise Road and Enterprise Road to Mombasa Road
  6. Jogoo Road      Rabai Road to Outer Ring Road
  7. Outer Ring Road    Juja Road to Jogoo Road
  8. Juja Road      Murang’a Road to Outer Ring Road
  9. Quarry Road      Racecourse Road to Pumwani Road and Pumwani Road to Landhies Road
- b. Proposed Bypass Routes
1. Southern Bypass
  2. Eastern Bypass
  3. Northern Bypass
  4. Langata Road and James Gichuru Link
  5. Waiyaki Way and Northern Bypass Link
- c. Missing Links
1. Gitanga Road - Kangemi Link
  2. Ole Odume Link
  3. Langata Road - Ngong Road - James Gichuru Road Link
  4. Waiyaki Way - Limuru Road Link



5. Riverside Drive
  6. Ring Road Parklands
  7. Muratina Road
  8. Landhies Road - Quarry Road Link
  9. Lunga Lunga Road - Outer-Ring Road Link
  10. Likoni Road Extension to Mombasa Road
  11. Processional Way - Kenyatta Avenue to State House Road Link
- d. Existing Traffic Lights Points' Improvement

Proposed implementation programme of the above major road arteries are shown in Table 2.3-1.

**TABLE 2.3-1 PROPOSED IMPROVEMENT MEASURES TO EACH ROAD**

Road Name	Immediate Action	Long-term	Present Status in 2004
Langata Road:	To improve at Madaraka estate and widen the section Nyayo Stadium to Ngei Estate turnoff.	To convert to dual carriageway from Nyayo Stadium to Magadi Road turnoff.	Complete up to KWS
Ngong Road	To improve junctions at Nairobi Club and Kenya Traffic Headquarters	To make into dual carriageway form Uhuru Highway to Dagoretti Corner-Uthiru; Dagoretti Corner-Karen	No action
Waiyaki Way / Chiromo Road	To improve junction at Museum Bridge		No action
Limuru Road	To improve junction with Thika Road and widen road to Ruaka		FS for widening
Kiambu Road	To widen the road within the city boundary	To make into dual carriageway form Muthaiga to Kiambu Town	No action
Thika Road	Do nothing		No action
Mombasa Road	To increase the number of lanes to the Toll Station, to widen from Jomo Kenyatta Airport to the Athi Rive turnoff		To be widened by NCTIP

The Study also recommended that the major cross roads be created as an inner city circle around the CBD, a middle circle connecting Ngei Estate, Westlands, Pangani and Industrial Area, and ultimately an outer circle/ring road including Dagoretti, Kangemi, Kitsuru, Muthaiga, Kariobangi, and Jomo Kenyatta Airport. An implementation programme was proposed below but no progresses are reported until now (Table 2.3-2).

**TABLE 2.3-2 PROPOSED IMPLEMENTATION PROGRAMME**

Road Name	Immediate Action	Medium-term	Present Status in 2004
Magadi Road	To widen the road and cut trees in road reserve to improve visibility (sight distance)		
Ngei Estate - Woodley	To build this link		(Missing Link 12)
Naivasha Road	To improve junction with Waiyaki Way		
James Gichuru Road	To improve junctions at Gitanga Road and Strathmore College		
Woodley Estate - Westlands	To build this missing link		(Missing Link 6/7)
Msongari - Red Hill		To build this link	
Ridgeways - Moi Sports Complex Kassarani	To establish this link by completing gaps in the system		
Kariokor - Kijabe Road	To build this link to dual carriageway standard		(Ring Road)
Pangani - Eastleigh - Jogoo Road	To establish this link by improving existing road sections		

Note: ( ) means NCC proposed plans and projects in 2004.

#### **2.3.4 A Road Network Development Master Plan Study (1995)**

This study was carried out by JICA and Ministry of Public Works in 1995. The report recommended a Superhighway by upgrading Uhuru highway and Nairobi Bypass. The concept of superhighway and the Nairobi southern bypass are being considered in the scope of the Northern Corridor Transport Improvement Project in 2003.

#### **2.3.5 Kenya Urban Transport Improvement Project (KUTIP) : Nairobi: Long Term Transport Study, Stage I**

The Government of Kenya and World Bank launched KUTIP and the transport study of Nairobi prepared a report of Nairobi Long Term Transport Study, Stage I in 1999. This study was the first comprehensive study for the land use and transport in the Nairobi Metropolitan since the 1973 Nairobi Metropolitan Strategy. However, KUTIP was suspended in the mid stage and this report was not authorised by GOK. Therefore the JICA Study reviewed the data and plans of the study.

#### **2.3.6 Kenya Road Concession Framework**

This study was carried out for the private sector involvement in the road construction and management in the scope of the Northern Corridor Transport Improvement Project. The study covers all stretch of northern corridor and concluded the private concession would be viable. However, the study of the Kenya Transportation Policy and Roads Sub-Sector Policy and Strategy concluded this viability would be uncertain. Out of all stretches, the section of the route of Southern Bypass is taken a candidate of concession. As mentioned, above however, this route shall require a comprehensive EIA.

**2.3.7 Northern Corridor Transport Improvement Project (On-going)**

Lender:	World Bank
Loan/Credit Amount:	US\$ 207 million
Total Project Cost:	US\$ 276.25 million
Effective Date:	Expected 27 September 2004
Closing Date:	31 December 2009
Borrower:	The Republic of Kenya
Implementation Agencies:	Ministry of Roads, Public Works and Housing (US\$ 160 million); Ministry of Transport and Communications (US\$ 2.2 million); Kenya Airports Authority (US\$ 34.8 million), and Kenya Civil Aviation Authority (US\$ 10 million)

**Project Background**

One of the main objectives of the Government in the transport sector is to stimulate private sector led economic growth through reducing the cost of doing business in Kenya and increasing its competitiveness in the domestic, regional and international markets. However, the sector is constrained by lack of adequate funds; institutional inefficiencies; weakness in the policy, legal and regulatory environment; poor safety and security standards at the airports and Mombasa port; and inadequate institutional capacity and human resource skills. As a result, the transport costs and travel times are high and reliability is low. The project is to assist the Government in its efforts to address these challenges, through the improvement of priority transport infrastructure along the Northern Corridor.

Northern Transport Corridor connects port of Mombasa with Nairobi, Uganda, Rwanda, Burundi and Democratic Republic of Congo. The project is expected to enhance domestic and regional trade and create job opportunities in the construction industry.

**Project Objectives**

The Project Development Objectives are: (a) increase efficiency of road transport along Northern Corridor to facilitate trade and regional integration; (b) enhance aviation safety and security to meet international standards; and (c) promote private sector participation in the management, financing and maintenance of road assets. This project is ongoing.

# **APPENDIX 4**

## **ROAD NETWORK**

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<b>4.1 AVAILABLE DATA AND BASE MAP</b>	<b>A4-1</b>
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## APPENDIX 4 ROAD NETWORK

### 4.1 AVAILABLE DATA AND BASE MAP

#### (1) Available Data for Base Map

The following data were available for preparing a base map of the Study Area. Since only the topographic maps cover all the Study Area, so far the topographic maps were utilized as the base map (Table 4.1-1).

**TABLE 4.1-1 AVAILABLE DATA FOR BASE MAP**

Data	Description	Remarks
Topographic map (1/50,000)	Maps cover the study area	<ul style="list-style-type: none"> <li>• Maps was produced in 1972/3</li> <li>• Some contours in feet</li> <li>• No new road and present land use</li> </ul>
JICA GIS Data in CBD	Data covers 15km <sup>2</sup> of CBD in Nairobi	<ul style="list-style-type: none"> <li>• Data was produced in 2000</li> </ul>
JICA Aerial Photo in Nairobi	Photo was taken in 2003 Covering Nairobi City only.	<ul style="list-style-type: none"> <li>• No full orthophoto product</li> </ul>
Satellite Photo	Photo was taken in 2004 Covering area is urban area in the Study Area	<ul style="list-style-type: none"> <li>• Lack of eastern part but covers most urban area.</li> </ul>

#### (2) Road Inventory Data

The list of available inventory data of roads is given in Table 4.1-2.

**TABLE 4.1-2 PRESENT ROAD INVENTORY DATA**

Item	Data/Information	Organization	Data Form	Inventory Date	Remarks
Road List	Classified road	MORPW	GIS ArcGIS	June 2003	No coordination with road name and width
	Unclassified road	KRB/MORPW	Not Available	Not Available	No road list
	Nairobi city road	CCN	Excel Sheet	2001	No GIS Data
Road Network Map	Topographic map	Survey of Kenya	1/50,000	1972/1973	Old, no new roads
	Classified road map	MORPW	GIS ArcGIS	June 2003	No CCN area
	City road map	Survey of Kenya	Print	1995	Only the Centre

#### Classified Road under MOPWH

The latest road inventory of classified road under MORPW was made in June 2003, and compiled in Geological Information System (GIS) by the Section of Road Inventory of MORPW in 2004. The data covered all classified roads including major roads classified as A, B, C that are network components for the master plan, and the secondary and minor roads classified as D, E, and Special Purpose roads such as government access (G) and rural access roads (R). The road inventory format is shown in Table 4.1-3 for major roads and Table 4.1-4 for minor roads.

The data compiled in GIS data included road number, road name, road class (A, B, C, D, E, Special Purpose), District, survey date and time, link name and subsection name, GPS reading, section/subsection length, carriageway width, the type of pavement such as, AC (Asphalt Concrete), BT (Bituminous Surface Treatment), G (Gravel), (Earth), with the condition of the pavement/road surface, etc. The data covered classified roads under MORPW in Nairobi City, but not cover all the roads under CCN.

CCN Classified Road

The roads in Nairobi City under CCN are all classified roads and have a total of 1,852. CCN had a list of all city roads in a form of spread sheet that was prepared by Kenya Urban Transport Infrastructure Project (KUTIP) in 2001. The data however are not compiled in GIS data. Contents of the data however included road name, road class (H, P, D, L, A, C), area, zone (sub-district name), section or link length, road width, pavement type etc. but conditions are not included. This pavement condition were investigated by the field survey under the Study.

**TABLE 4.1-3 ROAD INVENTORY FORMAT FOR MAJOR ROAD**

Use for Road ( A / B / C & Major Roads of NCC)

Road No. : Road Name: Road Class: Survey by: Road Length: km (From Sta. To Sta. ) Province: Date:

Road Data

Link No.	Sub-section No.	Sub section Length (km)	Station (km)		Row (m)	Carriageway			Shoulder/Sidewalk		Median Width (m)	Drainage		Terrain	Roadside Land Use	Road Structure	Substandard Alignment	Traffic Characteristics	Remarks	
			From	To		Type	Width (m)	Condition	Type	Width (m)		Type	Width (m)							

Bridge Data

Link No.	Sub-section No.	Bridge Name	Station (km)	Bridge Type	Bridge Length (m)	Span Length (m)	Carriageway Width (m)	Sidewalk Width (m)	Condition (Super str.)	Condition (Sub str.)	Remarks

Type:

- AC (Asphalt Pavement)
- ST (Surface Treatment)
- CC (Cement Concrete)
- G (Gravel)
- E (Earth)

Terrain:

- F (Flat)
- R (Rolling)
- M (Mountainous)

Roadside Environment

- R (Resident)
- C (Commercial)
- I (Industry)
- A (Agriculture)
- F (Forest)

Road Structure

- Em (Embankment H 2.0m)
- Cu (Cut H 2.0m)
- Le (Level H < 2.0m)

Traffic Characteristics

- Few ( V 1,000 )
- Medium ( 1,000 LV 5,000 )
- Heavy ( 5,000 < V 10,000 )
- Very Heavy (Over 10,000)

**TABLE 4.1-4 ROAD INVENTORY FORMAT FOR MINOR ROAD**

Use for Road ( Minor Road )

Road No. : Road Length: Road Name: km (From Sta. To Sta. ) Road Class: Province: Survey by: Date:

Road Data

Link No.	Sub-section No.	Sub section Length (km)	Station (km)		Row (m)	Carriageway			Shoulder/Sidewalk		Terrain	Roadside Environment	Road Structure	Substandard Alignment	Traffic Characteristics	Remarks	
			From	To		Type	Width (m)	Condition	Type	Width (m)							

Bridge Data

Link No.	Sub-section No.	Bridge Name	Station (km)	Bridge Type	Bridge Length (m)	Span Length (m)	Carriageway Width (m)	Sidewalk Width (m)	Condition (Super str.)	Condition (Sub str.)	Remarks

Type: AC (Asphalt Pavement) ST (Surface Treatment) CC (Cement Concrete) G (Gravel) E (Earth)  
 Terrain: F (Flat) R (Rolling) M (Mountainous)  
 Roadside Environment: ·R (Resident) ·C (Commercial) ·I (Industry) ·A (Agriculture) ·F (Forest)  
 Road Structure: ·Em (Embankment H 2.0m) ·Cu (Cut H 2.0m) ·Le (Level H < 2.0m)  
 Traffic Characteristics: ·Few (V 1,000) ·Medium (1,000 LV 5,000) ·Heavy (5,000 < V 10,000) ·Very Heavy (Over 10,000)

**(3) Field Survey**

The items listed below were surveyed and recorded.

Road

Road name (road No.), section name (section No.), Chainage (distance from the start point), section length, widths of carriageway and shoulders, type of pavement, pavement condition, existence / nonexistence of side walk, terrain, and land use.

Bridge

Bridge name, location (chainage), bridge type, length, span length, widths of carriageway and sidewalk, and conditions of deck slab/ superstructure/ substructure/ approaches.

A field survey used either the form of detailed field survey or simple field survey due to importance of the road network. The detailed field survey was carried out for important components of road network of the master plan such as the major roads of class A, B, C, and some D under MORPW and class H, P, D under CCN. On the other hand the simple field survey collects only items of road management and maintenance, mainly road width, pavement type and conditions, etc. and adopted for the minor roads that included D, E, Special Purpose Roads under MORPW, and the minor road of CCN.

At the same time the bridge inventory survey was conducted for major bridges using the bridge inventory data of MORPW and a report prepared by former JICA bridge expert of MOPWH, and updated by the present conditions.

#### (4) Data Recording

All data collected above are compiled in GIS data, because KRB intends to integrate road inventory data of Road Department of MORPW, CCN, MOLG by GIS Data Base. Thus CCN road inventory data were converted into GIS data by merging CCN inventory data with GIS positioning data that were collected separately by the Study. Some road alignments of the GIS data were different from the topographic maps of the Study Area, due to different coordination system. Table 4.1-5 shows the list of international roads while the list of national traffic roads is available in Table 4.1-6.

**TABLE 4.1-5 INTERNATIONAL TRUNK ROADS (CLASS A)**

Road No.	Length (Km)	From	Through	To	Remark
Study Area					
A109	499.3	Mombasa	-	Athi River	Connecting A104
A104	650.1	Namanga (Tanzania Border)	Athi River/ Nairobi	Malaba (Uganda Border)	Tanzania/Uganda
A2	846.4	Nairobi	Thika	Moyale (Ethiopia Border)	Ethiopia
A3	570.6	Thika	Garissa	Liboi (Somalia Border)	Somalia
Outside of Study Area					
A1	896.9	Migori (Tanzania Border)	Kitale	Lokichogio (Sudan Border)	Tanzania/Sudan
A14	113.6	Mombasa	-	Lunga Lunga (Tanzania Border)	Tanzania
A23	114.0	Voi (A104)	-	Taveta (Tanzania Border)	Tanzania

**TABLE 4.1-6 NATIONAL TRUNK ROADS (CLASS B)**

Road No.	Length (Km)	From	Through	To	Remark
Study Area					
B10	8.3	A104 (Mombasa Road)	-	Jomo Kenyatta Airport	-
B3	299.5	Rioni ( A104 )	Narok	Kisii (A1)	-
Outside of Study Area					
B1	237.5	Londiani (A104)	Kisumu ( A1 )	Busia	Uganda Border
B2	65.8	Eldoret (A104)	-	Kitale (A1)	-
B4	292.5	Nakuru (A104)	Marigat	Sigor (A1)	-
B5	181.7	Nyeri ( A2 )	Nyahururu	Nakuru ( A104 )	-
B6	166.6	Wamumu (A2)	Embu (B7)	Meru (A2)	-
B7	272.5	Kibwezi A109 )	Kangonde (A3)	Embu (B6)	-
B8	439.8	Mombasa( A109 )	Malindi	Garissa (A3)	-
B9	783.9	Isiolo (A2)	Wajir	Mandera	Ethiopia/Somalia Border

Note: B3 passes through only the north-west edge of the Study Area.  
Cities on the road numbers are major cities near junctions.



## 4.2 BRIDGE AND STRUCTURE CONDITIONS

TABLE 4.2-1 MAJOR BRIDGES IN THE STUDY AREA (OUTSIDE NAIROBI)

Road Name	Length (m)	PreStrs	Concrete	Steel	Bailey	Masonry	Grand Total
A104	~5	8	-	-	-	-	8
	5~10	-	-	-	-	-	-
	10~20	-	-	-	-	-	-
	20~30	8	-	-	1	-	9
	30~40	2	-	-	-	-	2
	40~	1	-	-	-	-	1
A104 Total		19	-	-	1	-	20
A2	~5	1	-	-	-	-	1
	5~10	1	-	-	-	-	1
	10~20	4	1	-	-	-	5
	20~30	1	1	-	-	-	2
	30~40	2	-	-	-	-	2
	40~	1	-	-	-	-	1
A2 Total		10	2	-	-	-	12
A3	53.0	1	-	-	-	-	1
A3 Total		1	-	-	-	-	1
C	~5	-	-	-	-	-	0
	5~10	2	3	-	1	-	6
	10~20	-	1	-	-	-	1
	20~30	2	-	-	-	-	2
	30~40	1	-	-	-	-	1
	40~	2	-	-	-	-	2
C Total		7	4	0	1	-	12
D	~5	0	-	-	-	-	0
	5~10	3	8	-	1	-	12
	10~20	4	-	-	-	-	4
	20~30	1	-	-	-	-	1
	30~40	1	1	-	-	-	2
	40~	1	1	-	-	-	2
D Total		10	10	0	1	-	21
E	~5	1	-	-	-	-	1
	5~10	1	-	-	-	-	1
	10~20	2	1	1	-	-	4
	20~30	-	-	2	-	-	2
	30~40	1	-	-	-	-	1
	40~	-	-	-	-	-	0
E Total		5	1	3	0	-	9
Grand Total		52	17	3	3	-	75

Source: MORPW

TABLE 4.2-2 MAJOR BRIDGE CONDITIONS IN NAIROBI CITY

No.	Name of Road	Bridge name	Type	Length	Superstructure	Substructure
A104	MombasaRd/Uhuru Highway	Footbridge	Concrete	32.05	good	good
A104	Uhuru Highway/Msa Rd	Footbridge	Concrete	22.4	fair	fair
A104	Waiyaki Way	Overpass	Concrete	14.05	fair	fair
A3	Muranga/Thika Rd	Nairobi Rvr RHS	Concrete	18.7	fair	fair
A3	Muranga/Thika Rd	Nairobi river bridge	Concrete	15.0	fair	fair
A3	Thika Rd	Nairobi Rvr	Concrete	18.4	fair	fair
A3	Thika Rd	Conc. deck/steel beam	Steel	15.0	fair	fair
C58	Langata Rd	Box culvert	Box Culvert	15.5	bad	bad
C58	Langata Rd	Ngong River FtBridge	Concrete	11.5	fair	fair
C58	Langata Rd	Ngong River(LHS)	Concrete	12.0	fair	fair
C58	Langata Rd	Ngong River(RHS)	Concrete	12.0	fair	fair
C58	Langata Rd	Footbridge (Pedestrian)	Concrete	27.1	good	good
C59	Outer ring	Railway	Concrete	30.4	fair	fair
C59	Outer ring	Ngong River Bridge	Concrete	39.5	bad	bad
C59	Outer ring	Mathare river	Concrete	29.4	very bad	very bad
C59	Outer ring	Nairobi Rvr	Concrete	30.4	bad	bad
C60	Ngong Rd	box culvert	Box Culvert	8.0	bad	bad
C62	Limuru Road	River	Box Culvert	17.8	fair	fair
C62	Limuru Road	Gitathuru River	Concrete	12.0	fair	fair
C62	Limuru Road	Mathare river	Box Culvert	10.0	fair	fair
C98	Komarock	Stream nr Swamp	Box Culvert	10.5	fair	fair
C98	Komarock	Nairobi Rvr	Concrete	20.7	fair	fair
N-L	First Ave. Eastleigh	Nairobi Rvr	Concrete	14.6	bad	fair
N-A	Lamu Rd	Nairobi Rvr	Concrete	9.0	bad	fair
N-A	Mbagathi	Footbridge	Concrete	34.8	fair	fair
N-A	Mbagathi	Nairobi Rvr	Concrete	24.8	bad	bad
N-C	Ring Road Pumwani	Nairobi Rvr	Concrete	13.3	bad	bad
N-D	Lower Kabete Rd	Mathare river	Concrete	9.0	fair	fair
N-P	Juja Road	Sch. Ft brd	Steel	27.2	fair	fair
N-Uc	Museum Hill Rd	Sch. Ft brd	Concrete	14.05	Fair	Fair
N-Uc	Jogoo	Railway	Steel	21.4	fair	fair
N-Uc	Jogoo	Footbridge	Steel	34.5	fair	fair
N-Uc	Jogoo	Footbridge	Steel	26.8	fair	fair
N-Uc	Mtudadu Ave.	Nairobi Rvr	Concrete	17.5	fair	fair
N-Uc	Peponi	Mathare	Concrete	6.0	fair	fair
N-Uc	Pumwani Rd	Nairobi Rvr	Concrete	8.3	bad	bad
N-Uc	Race course rd	Nairobi Rvr	Concrete	19.2	bad	bad

Note: The width of the foot bridges were given as carriageway width.

Source: MORPW and JICA Study

TABLE 4.2-3 NON-MOTORISED TRANSPORT CONDITIONS

No.	Road Name	Survey Location	MT	Motorbike/ Tricycle	NMT			Total	NMT (%)	Road Conditions	
					Bicycle	Push/Pull Cart	Walker			Carriageway (m)	Sidewalk (m)
1	Ngoong Road	Nairobi Baptism Church	25,112	557	538	18	6,959	33,184	22.6%	9.3	Not all stretch
2	Kikuyu Road (Walthaka Shopping to Naivasha Rd)	Dagoretii	1,921	47	167	50	978	3,163	37.8%	5.9	No
3	Naivasha Road (Kawangware to Ngong Rd)	Riruta	4,116	51	755	40	4,523	9,485	56.1%	6.3	No
4	James Gichuru Road (Gitanga Rd to Waiyaki Way)	ST. Austins Academy	14,252	50	1025	0	3,684	19,011	24.8%	9.5	2.0
5	Arging Kodhek Road (Kingara Rd to Valley Rd)	Yaya center	19,561	142	484	10	5,512	25,709	23.4%	7.8	1.9
6	Mbagathi Way Corridor (Ngong Rd to Uhuru Highway)	Armed Forces Hospital	33,015	178	359	16	4,675	38,243	13.2%	14.0	1.5 Both sides
7	Waiyaki Way Corridor (Uthiru to Limuru Rd)	ABC Place Parkroad Nursing Home	31,509 15,428	434 77	672 288	154 132	2,968 8,029	35,737 23,954	10.6% 35.3%	4-lane divided 6.6	Not all stretch No
8	Kiambu Road (Thika Rd to City Boundary)	Muthaiga police Station	8,242	53	155	0	1,994	10,444	20.6%	8.0	1.0
9	Jogoo Road (Outerring Rd to Lusaka Rd)	Makongeni Police St.	55,629	532	1544	201	6,515	64,421	12.8%	16.6	2.0
10	Denis Pritt Road Corridor (Oloitokitok Rd to Kenyatta Av.)	St. Georges Primary Sch	7,980	137	646	1	6,458	15,222	46.7%	7.0	1.9 Both sides
11	Outer ring, Lunga Lunga & Mutindwa lii Buruburu (Railway bridge Makadara		16,916 8,426	61 104	2,843 2,603	128 30	6,330 5,791	26,278 16,954	35.4% 49.7%	7.3	No
12	Mombasa Road	Jokim Estate Nairobi South Pry. Schoo	31,715 48,082	71 704	742 155	6 11	3,775 2,530	36,309 51,482	12.5% 5.2%	23.7 4-lane divided	No No
13	Limuru Road (Murunga Rd to City Boundary)	Canadian Embassy	16,837	221	624	0	1,528	19,210	11.2%	6.7	No (Partial)
14	Thika Road (Murunga Rd to Kenyatta University)	Safari Park Kenyatta University	32,361 20,694	132 23	667 732	27 5	3,513 3,834	36,700 25,288	11.5% 18.1%	14.8 4-lane divided	No No

## **APPENDIX 4.3**

### **ROAD INVENTORY RESULTS**

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)	
1	<b>Kajiado Road</b>										
		A	A104	E1480	DB (A109)	2	Surface Dressing	Fair	13.902		
		A	A104	DB	A109	2	Premix	Good	4.416		
		A	A104	DB	A109	2	Surface Dressing	Good	1.540		
		A	A104	E1480	DB	2	Premix	Good	0.052	19.909	
	<b>Mombasa Road</b>										
		A	A104	A109	DB	2	Premix	Good	10.033		
		A	A104	DB Machakos	Start of Dual C	2	Premix	Good	1.166	11.199	
	<b>Uhuru Highway/Waiyaki Way</b>										
		A	A104N	A104	B10	4	Premix	Good	1.184	Nairobi City	
		A	A104N	B10	C89	4	Premix	Good	2.188		
		A	A104N	C58	C61 central	4	Premix	Good	8.190		
		A	A104N	C58	C61 central	6	Premix	Good	0.021		
		A	A104N	C58	C61 central	6	Premix	Fair	0.169		
	A	A104N	C58	C61 central	6	Premix	Fair	0.212			
	A	A104N	C58	C61 central	6	Premix	Fair	1.159			
	A	A104N	C61 central	C61 north	4	Premix	Fair	13.820			
	A	A104N	C61 north	DB Kiambu	4	Premix	Fair	1.213	28.156		
<b>Naivasha Road</b>											
	A	A104	DB	C63	2	Premix	Good	5.933			
	A	A104	C63	E422	2	Premix	Good	2.540			
	A	A104	E422	B3	2	Premix	Good	9.545			
	A	A104	B3	C65	2	Premix	Good	3.500	21.518		
2	<b>Mombasa Road</b>										
		A	A109	C97	A104	2	Premix	Fair	20.490		
	A	A109	C97	A104	2	Premix	Good	1.591	22.081		
3	<b>Thika Road</b>										
		A	A2S	A2 Muthaiga	C59	4	Premix	Good	3.516	Nairobi city	
		A	A2S	C59	C59	4	Premix	Good	0.095		
		A	A2S	C59	DB Thika	4	Premix	Good	7.397		
		A	A2S	Pangani	DB Thika	4	Premix	Fair	0.004	11.006	
		A	A2S	BD	BD	4	Premix	Good	1.990		
		A	A2S	DB	DB	4	Premix	Fair	3.246		
		A	A2S	DB	DB	4	Premix	Fair	0.539		
		A	A2S	DB	DB	4	Premix	Fair	1.230		
		A	A2S	DB	DB	4	Premix	Fair	0.173		
		A	A2S	DB	DB	4	Premix	Fair	8.635		
		A	A2S	DB	DB	4	Premix	Good	0.305		
		A	A2S	DB	DB	4	Premix	Good	1.853		
		A	A2S	DB	DB	4	Premix	Fair	11.815	29.787	

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL(KM)
4	Garissa Road									
	Thika	A	A3	A2S	BD	2	Premix	Good	5.338	
	Thika	A	A3	A2S	BD	2	Premix	Fair	3.641	
	Thika	A	A3	A2S	BD	2	Premix	Good	24.602	
	Thika	A	A3	A2S	BD	2	Premix	Good	0.405	33.987
									<b>Total A</b>	<b>177.643</b>
5	Airpot Road									
	Nairobi	B	B10E	A104S	C59	2	Premix	Good	1.632	
	Nairobi	B	B10E	C59	JKIA	2	Premix	Good	0.286	
	Nairobi	B	B10W	A104N	A104S	2	Premix	Good	0.442	
	Nairobi	B	B10W	A104S	C59	2	Premix	Good	1.270	
	Nairobi	B	B10W	C59	JKIA	2	Premix	Good	0.332	3.962
									<b>Total B</b>	<b>3.962</b>

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
6	Magadi Road Kajiado	C	C58	E1497	D523	2	Surface Dressing	Good	4.365	
		C	C58	D523	DB	2	Premix	Fair	11.324	
		C	C58	DB Kajiado	C63	2	Premix	Fair	3.303	
		C	C58	DB Kajiado	C63	2	Premix	Good	1.415	
		C	C58	C63	C58N	2	Premix	Good	1.833	22.240
7	Langatta Road Nairobi	C	C58S	C58	Mb RdN	2	Premix	Good	4.751	
		C	C58S	Mb Rd	A104N	2	Premix	Good	1.539	
		C	C58S	A104N	A104S	2	Premix	Good	0.049	6.339
		C	Mb RdN	C58	C61	2	Premix	Good	2.951	
		C	Mb RdN	C58	C61	2	Premix	Fair	0.084	
8	Outer Ring Road Nairobi	C	Mb RdS	C58	C61	2	Premix	Fair	2.931	5.966
		C	C59	B10E	C89	2	Premix	Fair	2.738	
		C	C59	B10E	C89	2	Premix	Good	0.130	
		C	C59	C89	C98	2	Premix	Good	5.958	
		C	C59	C89	C98	2	Premix	Poor	1.324	
		C	C59	B10	A2	2	Premix	Poor	0.053	
		C	C59	C98	A2N	2	Premix	Poor	2.861	
		C	C59	A2S	A2N	2	Premix	Poor	0.104	
		C	C59	C59	C59	2	Premix	Poor	0.135	
		C	C59	A2N	A2S	2	Premix	Poor	0.096	13.399
9	Ngong Road Kajiado	C	C60	D523	DB	2	Surface Dressing	Fair	4.817	
		C	C60	A104	D523	2	Premix	Fair	3.458	
		C	C60	A104	DB Kajiado	2	Premix	Fair	5.656	
		C	C60	A104	DB Kajiado	2	Premix	Fair	0.028	
		C	C60	A104	DB Kajiado	2	Premix	Fair	1.408	15.367
10	Naivasha Road/Ngong Road Nairobi	C	C61	A104	C60	3	Premix	Fair	3.606	
		C	C61	Mbagathi Rd	C60	2	Premix	Fair	0.763	
		C	C61	A104	Mbagathi Rd	2	Premix	Fair	2.176	
		C	C61	C60	A104	2	Premix	Poor	7.211	
		C	C61	C60	A104	2	Premix	Poor		13.756
11	Limuru Road Kiambu	C	C62	C63	DB	2	Premix	Good	5.585	
		C	C62	FOREST ROAD	DB KIAMBU	2	Premix	Good	10.185	
		C	C62	A104	DB	2	Premix	Good	14.605	
		C	C62	A104	DB	2	Premix	Good		30.375
		C	C62	A104	DB	2	Premix	Good		

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
12	Nairobi	C	C63	C68	D412	2	Premix	Good	7.384	
	Kiambu	C	C63	DB	A104	2	Surface Dressing	Fair	6.212	
	Nairobi	C	C63	C60	D412	2	Premix	Good	6.458	
	Kiambu	C	C63	DB	A104	2	Surface Dressing	Poor	0.220	
	Kiambu	C	C63	DB	A104	2	Surface Dressing	Fair	0.813	
	Kiambu	C	C63	DB	A104	2	Surface Dressing	Poor	0.220	
	Kiambu	C	C63	A104	C62	2	Surface Dressing	Fair	11.316	
	Kiambu	C	C63	C62	C64	2	Surface Dressing	Fair	3.440	
	Kiambu	C	C63	C62	64	2	Surface Dressing	Poor	1.554	
	Kiambu	C	C63	C62	C64	2	Surface Dressing	Good	13.652	
	Kiambu	C	C63	C64	DB	2	Surface Dressing	Poor	5.587	
	Thika	C	C63	A2S	BD	2	Surface Dressing	Poor	1.457	
	Thika	C	C63	A2S	BD	2	Surface Dressing	Very Poor	3.988	
	Thika	C	C63	A2S	BD	2	Premix	Good	4.710	67.011
13	<b>Kiambu Road</b>									
	Nairobi	C	C64	A2 MUTHAIGA	DB Kiambu	2	Premix	Good	5.533	
	Kiambu	C	C64	DB	D409	2	Premix	Fair	4.419	
	Kiambu	C	C64	D409	C63	2	Surface Dressing	Poor	1.021	
	Kiambu	C	C64	E432	E433	2	Surface Dressing	Very Poor	0.641	
	Kiambu	C	C64	C63	E432	2	Surface Dressing	Poor	3.285	
	Kiambu	C	C64	E432	E433	2	Surface Dressing	Poor	4.679	
	Kiambu	C	C64	E433	E431	2	Surface Dressing	Fair	1.210	
	Kiambu	C	C64	E433	E431	2	Surface Dressing	Very Poor	0.925	21.715
14	<b>Ruiru Kiambu Road</b>									
	Thika	C	C65	C63	BD	2	Surface Dressing	Good	11.798	11.798
15	<b>Thika - Naivasha</b>									
	Thika	C	C66	A104	A2S	2	Surface Dressing	Good	1.219	
	Thika	C	C66	A104	A2S	2	Surface Dressing	Good	2.242	
	Thika	C	C66	A104	A2S	2	Surface Dressing	Fair	7.177	10.6381
16										
	Thika	C	C67	A2N	BD	2	Surface Dressing	Very Poor	7.530	
	Thika	C	C67	A2N	BD	2	Gravel	Poor	2.862	10.392
17										
	Thika	C	C70	A2	DB	2	Premix	Fair	1.538	
	Thika	C	C70	A2	DB	2	Surface Dressing	Fair	6.457	7.995
18	<b>Airport North Road</b>									
	Nairobi	C	C89	A104	DB	2	Premix	Fair	1.560	
	Nairobi	C	C89	A104	APTC	2	Premix	Poor	0.921	
	Nairobi	C	C89	A104	APTC	2	Surface Dressing	Fair	7.032	9.5130



TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL(KM)	
19	<b>Koma Roack Road</b>										
	Machakos	C	C98	C99	C100	2	Gravel	Good	5.463		
	Machakos	C	C98	C99	C100	2	Gravel	Fair	1.452		
	Machakos	C	C98	C99	C100	2	Earth	Fair	1.589		
	Machakos	C	C98	C99	C100	2	Earth	Poor	3.640		
	Machakos	C	C98	C99	C100	2	Earth	Fair	0.593		
	Machakos	C	C98	C99	C100	2	Premix	Fair	1.789		
	Machakos	C	C98	DB	C99	2	Premix	Fair	0.016		
	Machakos	C	C98	DB	C99	2	Premix	Good	14.817		
	Machakos	C	C98	DB	C99	2	Premix	Good	17.411		
	Nairobi	C	C98	C59	DB	2	Premix	Fair	2.758		
	Nairobi	C	C98	C59	DB	2	Gravel	Fair	1.694		
	Nairobi	C	C98	C59	DB	2	Premix	Fair	20.280	71.502	
	Nairobi	C	JUJA	C59	PANGANI	2	Premix	Fair			
	Nairobi	C	JUJA	C59	PANGANI	2	Premix	Fair	3.571	3.571	
20	<b>Machakos-Kanguundo Road</b>										
	Machakos	C	C99	C97	C98	2	Gravel	Fair	3.244		
	Machakos	C	C99	C97	C98	2	Gravel	Poor	4.952	8.195	
	Nairobi to C63 to A104 (Rironi)									<b>Total C</b>	<b>329.773</b>

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)	
21	C63 (Kabete) to E423 (Ngecha)	D	D378	C63	DB	2	Surface Dressing	Fair	0.318		
		Kiambu	D	D378	DB	2	Surface Dressing	Fair	4.135		
		Kiambu	D	D378	E423	C63	2	Gravel	Poor	3.285	
		Kiambu	D	D378	E423	C63	2	Gravel	Very Poor	1.338	
		Kiambu	D	D378	E423	C63	2	Gravel	Fair	2.966	
		Kiambu	D	D378	E423	C63	2	Gravel	Fair	0.299	
		Kiambu	D	D378	E423 (N. End)	E423 (S. End)	2	Surface Dressing	Fair	0.075	
		Kiambu	D	D378	A104	E423	2	Gravel	Good	0.020	
		Kiambu	D	D378	A104	E423	2	Premix	Fair	0.081	
		Kiambu	D	D378	A104	E423	2	Premix	Fair	0.027	
		Kiambu	D	D378	A104	C63	2	Gravel	Fair	0.146	
		Kiambu	D	D378	A104	E423	2	Gravel	Fair	1.516	
		Kiambu	D	D378	A104	E423	2	Gravel	Good	0.131	
		Kiambu	D	D378	A104	E423	2	Gravel	Good	1.482	15.819
22	A2 (Juja) to Study Border :C64 (Ngenda)										
	Thika	D	D397	A2N	C64	2	Surface Dressing	Good	10.000	10.000	
23	A2 (Ruiru) to Study Border : C64 (Kiamwangi)										
	Thika	D	D398	A2N	FOREST	2	Surface Dressing	Good	12.031	12.031	
24	C63 ( Kahawa ) to Study Border :C64 (Ngenda)										
	Thika	D	D399	C63	D398	2	Earth	Good	1.393		
	Thika	D	D399	C63	D398	2	Gravel	Fair	1.184		
	Thika	D	D399	C63	D398	2	Gravel	Good	1.152		
	Thika	D	D399	C63	D398	2	Surface Dressing	Fair	6.420	10.150	
25	C98 (Njiru) A2 ( Githurai) to C63 (Kahawa)										
	Nairobi	D	D400	C98	A2	2	Gravel	Fair	5.513		
	Nairobi	D	D400	C98	A2	2	Surface Dressing	Good	2.465		
	Nairobi	D	D400	C98	DB Kiambu	2	Surface Dressing	Good	0.149		
	Nairobi	D	D400	A2	DB Kiambu	2	Surface Dressing	Good	4.671		
	Kiambu	D	D400	DB	C63	2	Premix	Fair	3.210	16.008	
26	D409 (Chianda) to Study Border : C65 (Githunguri)										
	Kiambu	D	D403	D409	C65	2	Surface Dressing	Fair	1.071	1.071	
27	D409 (Ndunberi) to Study Border : C65 (Githunguri)										
	Kiambu	D	D404	D409	C65	2	Surface Dressing	Good	10.300	10.300	
28	C63 (Kiambaa) to D409 (Ciandai)										
	Kiambu	D	D406	C63 (S. End)	C63 (N. End)	2	Surface Dressing	Very Poor	1.261		
	Kiambu	D	D406	C63	D409	2	Surface Dressing	Very Poor	0.164		
	Kiambu	D	D406	C63	D409	2	Surface Dressing	Poor	0.757		
	Kiambu	D	D406	C63	D409	2	Surface Dressing	Fair	3.809	5.990	
29	C62 (Highridge) to C63 (Kiambaa) to D409 (Limuru)										
	Kiambu	D	D407	C63	C62	2	Premix	Fair	5.005		
	Kiambu	D	D407	C62	C63	2	Premix	Good	14.481	19.486	

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL(KM)	
30	Kiambu	D	D408	C62	DB	2	Surface Dressing	Good	3.943	6.997	
			D408	C62	DB KIAMBU	2	Surface Dressing	Fair	3.054		
31	Nairobi	D	<b>D400 (Githurai) C64 (Kambaa S/Area) C63 (Riabai) to Study Border (Karanbaini) D407 to A104(Limuru)</b>								
			D409	D400	C64	2	Surface Dressing	Fair	7.387		
			D409	C63	C64	2	Surface Dressing	Good	0.579		
			D409	D404	C63	2	Surface Dressing	Good	3.958		
			D409	D406	D404	2	Surface Dressing	Poor	3.661		
			D409	D406	D404	2	Gravel	Good	1.461		
			D409	D403	D406	2	Gravel	Good	3.636		
			D409	A104	D403	2	Surface Dressing	Poor	0.314		
			D409	A104	D403	2	Surface Dressing	Good	2.067		
			D409	A104	D403	2	Surface Dressing	Poor	0.278		
			D409	A104	D403	2	Gravel	Good	11.237		
			D409	A104	D403	2	Surface Dressing	Fair	3.499		
			D409	A104	D403	2	Surface Dressing	Poor	0.467		
			38.546								
32	Kiambu	D	<b>A104 (Parkland) to C63 (Kabite)</b>								
			D410	A104	DB	2	Surface Dressing	Poor	3.360		
			D410	A104	DB	2	Gravel	Fair	0.396		
			D410	A104	DB	2	Gravel	Poor	2.635		
			D410	A104	DB KIAMBU	2	Premix	Fair	8.991		
			D410	A104	DB	2	Surface Dressing	Fair	0.569		
15.951											
33	Kiambu	D	<b>C63 (Kinoo) to Study Border</b>								
			D411	C63	B3	2	Earth	Fair	1.364		
			D411	C63	B3	2	Gravel	Poor	1.871		
			D411	C63	B3	2	Surface Dressing	Very Poor	2.073		
5.309											
34	Nairobi	D	<b>C61 (Witaka) to C63 (Kinoo)</b>								
			D412	C61	DB KIAMBU	2	Premix	Fair	5.597		
			D412	C61	DB KIAMBU	2	Premix	Fair	1.079		
			A3 (Gatuanyaga) to D521(Kyelei)								
35	Thika	D	D49	D521	A3	2	Gravel	Good	0.535		
			D49	D521	A3	2	Earth	Fair	1.365		
			D49	D521	A3	2	Gravel	Fair	2.776		
			A3 (Gatuanyaga) to D521(Kyelei)								
4.675											
36	Machakos	D	<b>C98 (kivani) to Study Border :C97 (Vyulya)</b>								
			D518	C97	C98	2	Gravel	Fair	0.027		
			D518	C97	C98	2	Gravel	Fair	4.268		
			D518	C97	C98	2	Gravel	Fair	1.441		
5.736											
37	Machakos	D	<b>C98 (Lukeya) to C99(Mitaboni)</b>								
			D519	A109	C99	2	Earth	Poor	5.695		
			D519	A109	C99	2	Gravel	Fair	15.747		
			A109 (Lukeya) to C99(Mitaboni)								
21.442											

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)		
38	<b>C98 (Tala) to E489 (Matungulu)</b>											
	Machakos	D	D520	D521	E487	2	Gravel	Very Poor	0.956			
	Machakos	D	D520	D521	E487	2	Gravel	Poor	2.414			
	Machakos	D	D520	D521	E487	2	Gravel	Very Poor	2.792			
	Machakos	D	D520	D521	E487	2	Earth	Very Poor	0.014			
	Machakos	D	D520	D521	E487	2	Earth	Poor	0.013			
	Machakos	D	D520	D521	E487	2	Earth	Poor	1.902			
	Machakos	D	D520	D521	E487	2	Gravel	Fair	5.569			
	Machakos	D	D520	D521	E487	2	Earth	Very Poor	6.379	20.038		
	39	<b>C98 (Tala) to A3 (Gatunyaga)</b>										
		Machakos	D	D521	C98	DB	2	Gravel	Very Poor	0.408		
		Machakos	D	D521	C98	DB	2	Gravel	Fair	4.861		
		Machakos	D	D521	C98	DB	2	Gravel	Very Poor	1.326		
Machakos		D	D521	C98	DB	2	Gravel	Fair	2.939			
Machakos		D	D521	C98	DB	2	Gravel	Poor	0.868			
Machakos		D	D521	C98	DB	2	Gravel	Fair	1.064			
Machakos		D	D521	C98	DB	2	Gravel	Poor	3.210			
Machakos		D	D521	C98	DB	2	Gravel	Fair	2.145			
Machakos		D	D521	C98	DB	2	Gravel	Poor	1.120			
Machakos		D	D521	C98	DB	2	Gravel	Poor	0.060			
Machakos		D	D521	C98	DB	2	Gravel	Fair	0.080			
Machakos		D	D521	C98	DB	2	Gravel	Fair	5.093			
Machakos		D	D521	C98	DB	2	Gravel	Poor	5.737			
Machakos		D	D521	C98	DB	2	Gravel	Poor	0.007			
Machakos		D	D521	C98	DB	2	Gravel	Poor	1.108			
Thika		D	D521	A3	BD	2	Gravel	Fair	2.668	32.693		
40		<b>A104: Study BD C58 (Kiserian) C60 to study BD : D526</b>										
		Kajiado	D	D523	A104	C58	2	Surface Dressing	Poor	22.000		
		Kajiado	D	D523	C58	C60	2	Surface Dressing	Poor	9.806		
		Kajiado	D	D523	C60	E418	2	Surface Dressing	Poor	0.150		
		Kajiado	D	D523	E1491	D526	2	Gravel	Fair	5.750	37.706	
		A109 (Lukenya south) to E1809: C99										
41		Machakos	D	D527	A109	C99	2	Gravel	Fair	0.012		
		Machakos	D	D527	A109	C99	2	Gravel	Fair	3.631		
		Machakos	D	D527	A109	C99	2	Gravel	Good	10.510	14.154	
									<b>Total D</b>	<b>300.480</b>		

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
42	<b>A104 (Olurot) to D523(South Keekonyokia)</b>									
	Kajiado	E	E1480	D523	A104	1	Gravel	Very Poor	14.476	
	Kajiado	E	E1480	D523	A104	1	Surface Dressing	Fair	1.970	16.446
43	<b>D523 (Ngong)</b>									
	Kajiado	E	E1491	D523	Dead End	2	Surface Dressing	Fair	1.053	1.053
44	<b>C60 (Oloolua) to E702</b>									
	Kajiado	E	E1492	C60	E702	1	Gravel	Fair	5.338	5.338
45	<b>D523 (Nkaimoronay) to E702</b>									
	Kajiado	E	E1493	D523	E702	2	Gravel	Fair	6.529	
	Kajiado	E	E1493A	E1493 (W. End)	E1493 (E. End)	1	Gravel	Fair	1.843	8.371
46	<b>D523 (Nkaimoronay) to C58 (Ongata Rongai)</b>									
	Kajiado	E	E1494	D523	C58	1	Gravel	Poor	4.588	4.588
47	<b>A104 (Settled Area) to C58 (Ongata Rongai)</b>									
	Kajiado	E	E1495	C58	A104	2	Gravel	Poor	3.550	
	Kajiado	E	E1495	C58	A104	2	Gravel	Poor	21.658	
	Kajiado	E	E1495	C58	A104	2	Gravel	Fair	2.690	27.898
	Kajiado	E	E1496	C58	E1495	1	Gravel	Poor	7.403	
48	<b>C58 (Ongata Rongai)</b>									
	Kajiado	E	E1496	C58	E1495	1	Gravel	Poor	1.704	
	Kajiado	E	E1496	C58	E1495	1	Gravel	Poor	1.162	
	Kajiado	E	E1496A	E1496	C58	1	Gravel	Poor	0.959	11.229
	Kajiado	E	E1496A	E1496	C58	1	Earth	Fair	0.959	11.229
49	<b>C58 (Kisereni) to Study BD (South Keekonyokie)</b>									
	Kajiado	E	E1498	C58	E407	2	Gravel	Fair	11.800	11.800
50	<b>D411 (Kinoo) E418 (Ngong) Ngong</b>									
	Kiambu	E	E1499	DB	D411	2	Earth	Very Poor	2.327	
	Kajiado	E	E1499A	E418	Dead End	2	Gravel	Good	1.050	
	Kajiado	E	E1499A	E418	Dead End	2	Gravel	Very Poor	1.614	
	Kajiado	E	E1499A	E418	Dead End	2	Gravel	Excellent	2.082	
	Kiambu	E	E1499A	E1499	D411	1	Earth	Very Poor	3.022	
	Nairobi	E	E1499B	DB	Dead End	2	Earth	Good	3.062	
	Nairobi	E	E1499B	DB	Dead End	2	Earth	Very Poor	1.113	14.269
	<b>Muguga</b>									
	Kiambu	E	E1501	E423	E422	2	Gravel	Fair	1.907	1.907
52	<b>A104 (Rironi)</b>									
	Kiambu	E	E1504	D411	A104	2	Gravel	Fair	8.082	8.082
53	<b>Kikuyu</b>									
	Kiambu	E	E1505	E422 (W. End)	E422 (E. End)	2	Gravel	Poor	1.880	1.880
54	<b>Muguga</b>									
	Kiambu	E	E1506	E422 (S. End)	E422 (N. End)	2	Gravel	Poor	2.896	2.896

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
55	C63 (Muguga)	E	E1507	C63 (S. End)	C63 (N. End)	2	Surface Dressing	Poor	2.379	3.484
		E	E1507	C63 (S. End)	C63 (N. End)	2	Surface Dressing	Fair	0.131	
		E	E1507	C63 (S. End)	C63 (N. End)	2	Gravel	Poor	0.974	
		E	E1508	D411	C63	2	Surface Dressing	Very Poor	3.426	
56	C63 (Kinoo) to Study Border	E	E1508	D411	C63	2	Surface Dressing	Very Poor	3.426	3.426
		E	E1509	A104	D410	2	Surface Dressing	Poor	1.244	
		E	E1509	A104	D410	2	Gravel	Poor	1.506	
		E	E1509	D410	C63	2	Gravel	Poor	1.202	
57	A104 (Othiru Ruthimitu) to C63 (Kabete)	E	E1509	D410	C63	2	Gravel	Fair	0.439	4.391
		E	E1509	D410	C63	2	Gravel	Fair	0.439	
		E	E1510	E1509	D410	2	Surface Dressing	Very Poor	0.673	
		E	E1510	E1509	D410	2	Surface Dressing	Poor	1.601	
58	Othiru Ruthimitu South	E	E1510	E1509	D410	2	Surface Dressing	Very Poor	0.673	2.274
		E	E1510	E1509	D410	2	Surface Dressing	Poor	1.601	
		E	E1511	D410	E422	1	Earth	Poor	1.300	
		E	E1511	D410	E422	2	Surface Dressing	Poor	1.160	
59	Kabete	E	E1511	D410	E422	1	Earth	Poor	1.300	2.460
		E	E1511	D410	E422	2	Surface Dressing	Poor	1.160	
60	Kitisuru	E	E1512	E421	DB	2	Gravel	Good	3.990	3.990
		E	E1512	E421	DB	2	Gravel	Good	3.990	
61	A104 (Ngecha)	E	E1513	A104	E423	1	Gravel	Fair	0.992	3.460
		E	E1513	A104	E423	1	Gravel	Fair	2.467	
		E	E1514	D378	E425	2	Gravel	Poor	4.466	
62	Ngecha	E	E1514	D378	E425	2	Gravel	Poor	4.466	4.466
		E	E1515	D378	E421	2	Gravel	Very Poor	0.272	
		E	E1515	D378	E421	2	Surface Dressing	Very Poor	0.536	
		E	E1515	D378	E421	2	Gravel	Poor	1.748	
63	Nyathuna	E	E1516	E425	C62	2	Surface Dressing	Poor	1.662	1.662
		E	E1516	E425	C62	2	Surface Dressing	Poor	1.662	
		E	E1517	D408	C62	2	Earth	Poor	0.525	
64	C62 (Nyathuna)	E	E1517	D408	C62	2	Earth	Poor	0.525	8.079
		E	E1517	C63	D408	2	Earth	Poor	0.293	
		E	E1517	D408	C62	2	Earth	Fair	0.774	
		E	E1517	C63	D408	2	Earth	Fair	1.553	
		E	E1517	C63	D408	2	Earth	Poor	2.097	
		E	E1517	C63	D408	2	Earth	Fair	0.373	
		E	E1517A	C62	Dead End	2	Earth	Poor	2.279	
		E	E1517A	C62	Dead End	1	Earth	Poor	0.185	

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
66	<b>Kiambaa East</b>									
	Kiambu	E	E1518	D407	E1519	1	Gravel	Poor	3.595	
	Kiambu	E	E1518	E1520	E1520	1	Gravel	Poor	2.244	
	Kiambu	E	E1518	E1520	D406	1	Gravel	Poor	0.364	
	Kiambu	E	E1518	E1520	D406	1	Gravel	Fair	1.612	7.816
67	<b>C63 (Waguthu)</b>									
	Kiambu	E	E1519	D407	E1518	1	Gravel	Very Poor	1.605	
	Kiambu	E	E1519	D407	E1518	1	Gravel	Poor	0.490	
	Kiambu	E	E1519	E1518	C63	1	Gravel	Poor	2.182	4.277
68	<b>C63 (Ndumberi)</b>									
	Kiambu	E	E1520	C63	D409	2	Surface Dressing	Fair	2.545	
	Kiambu	E	E1520	C63	D409	2	Surface Dressing	Poor	1.623	
	Kiambu	E	E1520A	C63 (W. End)	C63 (E. End)	2	Surface Dressing	Poor	3.080	7.247
69	<b>Tigoni</b>									
	Kiambu	E	E1521	E423	E426	1	Earth	Fair	1.336	
	Kiambu	E	E1521	E423	E426	1	Earth	Poor	2.860	
	Kiambu	E	E1521	E423	E426	2	Earth	Fair	3.176	7.372
70	<b>Karabain South</b>									
	Kiambu	E	E1522	D407	Dead End	1	Surface Dressing	Poor	1.924	
	Kiambu	E	E1522A	E423	E1522	1	Surface Dressing	Poor	1.222	3.146
71	D399 to Study BD									
	Thika	E	E1530	D399	E499	2	Gravel	Good	1.400	1.400
72	<b>C66 (Thika Municipality)</b>									
	Thika	E	E1534	E495	C66	2	Earth	Very Poor	4.101	4.101
73	<b>A3 (Gatunyaga) to A2 E496 (Juja)</b>									
	Thika	E	E1535	E496	A3	1	Gravel	Fair	2.256	
	Thika	E	E1535	E496	A3	1	Gravel	Poor	1.353	
	Thika	E	E1535	E496	A3	2	Gravel	Fair	16.803	
	Thika	E	E1535	E496	A3	2	Gravel	Fair	3.603	
	Thika	E	E1535	E496	A3	2	Gravel	Good	7.173	
	Thika	E	E1535	E496	A3	2	Gravel	Fair	3.233	34.421
74	<b>A 3 (Gatunyaga)</b>									
	Thika	E	E1536	E1535	A3	2	Gravel	Poor	1.871	
	Thika	E	E1536	E1535	A3	2	Gravel	Fair	1.333	
	Thika	E	E1536	E1535	A3	2	Gravel	Fair	3.996	7.200
75	<b>C67 (Samuru) to Study BD</b>									
	Thika	E	E1551	C67	C67	2	Gravel	Good	9.600	9.600
76	<b>A3 (Study BD)</b>									
	Thika	E	E1597	E491	A3	2	Earth	Fair	2.900	2.900
77	<b>A3 (Thika Municipality) to Study BD</b>									
	Thika	E	E1598	A3	E493	2	Surface Dressing	Poor	0.800	0.800

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
78	Kakuyuni									
	Machakos	E	E1805	D518	E484	2	Earth	Poor	3.236	
	Machakos	E	E1805	D518	E484	2	Earth	Fair	0.017	
	Machakos	E	E1805	D518	E484	2	Earth	Fair	1.560	4.813
79	Lukuya North									
	Machakos	E	E1806	E434	D519	2	Earth	Very Poor	0.022	
	Machakos	E	E1806	E434	D519	2	Earth	Very Poor	16.624	16.646
80	Kawatheh									
	Machakos	E	E1818	E483 (S. End)	E483 (N. End)	2	Earth	Fair	0.021	
	Machakos	E	E1818	E483 (S. End)	E483 (N. End)	2	Earth	Fair	4.404	
	Machakos	E	E1818	E483 (S. End)	E483 (N. End)	2	Earth	Fair	1.554	5.979
81	A104 (Katani) to C98 (Ruai)									
	Machakos	E	E1890	A104	KATANI	2	Gravel	Good	10.597	
	Machakos	E	E1890	A104	KATANI	2	Earth	Good	10.771	21.368
82	C58 (Kisereni)									
	Kajiado	E	E418	C58	E1499A	2	Gravel	Fair	13.178	
	Kajiado	E	E418	E1499A	D523	2	Surface Dressing	Good	0.793	13.971
83	Kikuyu									
	Kiambu	E	E420	D411	E422	2	Gravel	Fair	3.869	
	Kiambu	E	E420	D411	E422	2	Gravel	Poor	0.446	
	Kiambu	E	E420	D411	E422	2	Gravel	Fair	0.178	4.493
84	Kabete									
	Kiambu	E	E421	C63	D378	2	Gravel	Fair	1.390	
	Kiambu	E	E421	C63	D378	2	Gravel	Poor	3.695	
	Kiambu	E	E421	E425	C63	2	Surface Dressing	Very Poor	2.085	
	Kiambu	E	E421	E425	C63	2	Gravel	Poor	0.275	7.445
85	Muguga									
	Kiambu	E	E422	DB	C63	2	Surface Dressing	Fair	0.560	
	Kiambu	E	E422	DB	C63	2	Surface Dressing	Poor	1.634	
	Kiambu	E	E422	E420	E422A	2	Gravel	Poor	3.714	
	Kiambu	E	E422	C63	DB	2	Surface Dressing	Poor	1.131	
	Kiambu	E	E422A	E422 (W. End)	E422 (E. End)	2	Surface Dressing	Fair	2.209	9.248
86	C62 (Noescha) to C63 (Muguga)									
	Kiambu	E	E423	C63	D378	2	Gravel	Fair	0.153	
	Kiambu	E	E423	C63	D378	2	Gravel	Fair	1.266	
	Kiambu	E	E423	C63	D378	2	Gravel	Poor	0.488	
	Kiambu	E	E423	C63	D378	2	Gravel	Poor	6.659	
	Kiambu	E	E423	C63	D378	1	Gravel	Fair	0.075	
	Kiambu	E	E423	C63	D378	2	Surface Dressing	Fair	0.020	
	Kiambu	E	E423	D378	C62	2	Surface Dressing	Fair	1.817	
	Kiambu	E	E423	C62	D407	2	Surface Dressing	Poor	3.572	
	Kiambu	E	E423	D378	C62	2	Surface Dressing	Poor	0.186	14.236



TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)	
87	<b>A104 (Othiru Ruthimitu) To C63 (Kinoo)</b>										
	Kiambu	E	E423A	C63	A104	2	Surface Dressing	Poor	3.235		
	Kiambu	E	E423A	C63	A104	2	Earth	Fair	2.748		
	Kiambu	E	E423A	C63	A104	2	Surface Dressing	Poor	0.535		
	Kiambu	E	E423A	C63	A104	2	Earth	Poor	0.082	6.600	
88	<b>Kihara to Ngecha</b>										
	Kiambu	E	E425	C63	D408	2	Surface Dressing	Fair	6.579		
	Kiambu	E	E425	D378	C63	2	Gravel	Poor	5.938		
	Kiambu	E	E425	D378	C63	2	Gravel	Fair	0.657	13.174	
89	<b>Tigoni</b>										
	Kiambu	E	E426	C62	D407	1	Surface Dressing	Poor	1.717		
	Kiambu	E	E426	C62	D407	1	Surface Dressing	Fair	2.993	4.710	
90	<b>Cianda to Karabain</b>										
	Kiambu	E	E427	D409	D406	2	Surface Dressing	Poor	13.952		
91	<b>Karabain</b>										
	Kiambu	E	E428	E427	D409	2	Gravel	Fair	2.032		
	Kiambu	E	E428	D407	E427	1	Surface Dressing	Poor	5.085	7.117	
92	<b>Ikinu (Study Area only)</b>										
	Kiambu	E	E431	D404	C64	2	Gravel	Fair	4.473	4.473	
93	<b>Thingang'a</b>										
	Kiambu	E	E432	D404	C64	2	Surface Dressing	Fair	3.816		
	Kiambu	E	E432	D404	C64	2	Surface Dressing	Poor	0.725	4.540	
94	<b>Kamiti</b>										
	Kiambu	E	E433	C64	C63	2	Surface Dressing	Poor	1.105		
	Kiambu	E	E433	C64	C63	2	Surface Dressing	Very Poor	5.551	6.656	
95	<b>A109 (Athi River) to C98 (Ruai)</b>										
	Machakos	E	E434	A109	C98	2	Gravel	Good	10.575		
	Machakos	E	E434	A109	C98	2	Earth	Very Poor	7.104		
	Machakos	E	E434	A109	C98	2	Earth	Very Poor	4.646		
	Machakos	E	E434	A109	C98	2	Earth	Very Poor	0.012	22.337	
96	<b>A102 (Ruiru)</b>										
	Thika	E	E435	D399	A2N	1	Surface Dressing	Fair	0.096		
	Thika	E	E435	D399	A2N	1	Gravel	Fair	3.353		
	Thika	E	E435	D399	A2N	1	Earth	Fair	0.950		
	Thika	E	E435	D399	A2N	1	Earth	Poor	0.758		
	Thika	E	E435	D399	A2N	2	Earth	Fair	1.494		
	Thika	E	E435	D399	A2N	2	Gravel	Good	1.801	8.452	

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
97	<b>C98 (Nguluni)</b>									
	Machakos	E	E474	C99	C98	2	Gravel	Fair	0.015	
	Machakos	E	E474	C99	C98	2	Gravel	Fair	0.554	
	Machakos	E	E474	C99	C98	2	Gravel	Poor	1.239	
	Machakos	E	E474	C99	C98	2	Gravel	Fair	1.278	
	Machakos	E	E474	C99	C98	2	Gravel	Very Poor	1.217	
	Machakos	E	E474	C99	C98	2	Gravel	Very Poor	5.136	
	Machakos	E	E474	C99	C98	2	Gravel	Very Poor	0.010	9.449
98	<b>C99 (Kawathei)</b>									
	Machakos	E	E483	C99	D518	2	Gravel	Good	5.228	
	Machakos	E	E483	C99	D518	2	Gravel	Poor	1.366	
	Machakos	E	E483	C99	D518	2	Gravel	Good	2.984	
	Machakos	E	E483	C99	D518	2	Earth	Fair	0.150	
	Machakos	E	E483	C99	D518	2	Earth	Good	5.049	
	Machakos	E	E483	C99	D518	2	Earth	Good	0.020	14.798
99	<b>Kakuyuni</b>									
	Machakos	E	E484	D519	E483	2	Surface Dressing	Poor	5.691	5.691
100	<b>C98 (Tala) to Kanzaru</b>									
	Machakos	E	E485	C98 (W. End)	C98 (E. End)	2	Earth	Fair	1.473	
	Machakos	E	E485	C98 (W. End)	C98 (E. End)	2	Earth	Very Poor	0.010	
	Machakos	E	E485	C98 (W. End)	C98 (E. End)	2	Earth	Poor	4.308	
	Machakos	E	E485	C98 (W. End)	C98 (E. End)	2	Earth	Very Poor	0.245	
	Machakos	E	E485	C98 (W. End)	C98 (E. End)	2	Earth	Fair	0.825	
	Machakos	E	E485	C98 (W. End)	C98 (E. End)	2	Earth	Very Poor	1.355	
	Machakos	E	E485	D521	C98	2	Earth	Poor	2.224	
	Machakos	E	E485	D521	C98	2	Earth	Very Poor	0.015	
	Machakos	E	E485	D521	C98	2	Earth	Fair	0.886	
	Machakos	E	E485	D521	C98	2	Earth	Very Poor	9.862	
	Machakos	E	E485A	D521	E485	2	Earth	Poor	2.794	23.997
101	<b>Kanzavi</b>									
	Machakos	E	E489	D521	D520	2	Earth	Very Poor	5.526	
	Machakos	E	E489	D521	D520	2	Earth	Poor	0.730	
	Machakos	E	E489	D521	D520	2	Earth	Very Poor	0.223	
	Machakos	E	E489	D521	D520	2	Earth	Poor	1.573	
	Machakos	E	E489	D521	D520	2	Earth	Fair	0.021	
	Machakos	E	E489	D521	D520	2	Earth	Fair	2.130	
	Machakos	E	E489	D521	D520	2	Earth	Poor	0.537	
	Machakos	E	E489	D521	D520	2	Earth	Poor	0.017	
	Machakos	E	E489	D521	D520	2	Earth	Fair	0.012	
	Machakos	E	E489	D521	D520	2	Earth	Fair	0.512	
	Machakos	E	E489	D521	D520	2	Earth	Fair	0.021	
	Machakos	E	E489	D521	D520	2	Earth	Poor	6.133	17.433

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL(KM)
102	A2 (Juja) To Study BD Thika	E	E495	A2S	C66	2	Gravel	Fair	11.200	11.200
103	A2 (Juja E1535) To Study BD Thika	E	E496	A2N	C64	1	Premix	Good	0.648	0.648
104	C60 (Oloolua) To C58 (Nkaimoronya) Kajiado	E	E702	C60	C58	1	Gravel	Poor	7.353	
	Kajiado	E	E702	C60	C58	1	Gravel	Fair	2.817	
	Kajiado	E	E702	C60	C58	1	Gravel	Poor	2.705	
<b>Total E</b>									<b>532.586</b>	

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL (KM)
105	<b>Cianda</b>	G	G11	D409	Dead End	2	Earth	Poor	0.538	
	Kiambu	G	G11A	G11B	C63	2	Earth	Fair	0.468	
	Kiambu	G	G11B	G6	Dead End	2	Gravel	Fair	0.295	1.301
106	<b>Tigoni</b>									
	Kiambu	G	G13	E426	Dead End	2	Earth	Fair	1.246	
	Kiambu	G	G13A	G13	Dead End	2	Earth	Poor	0.656	1.902
107	<b>Kahawa</b>									
	Kiambu	G	G2	D400	LOOP	2	Surface Dressing	Fair	0.097	
	Kiambu	G	G2	D400	LOOP	2	Gravel	Fair	0.108	
	Kiambu	G	G2	D400	LOOP	2	Gravel	Fair	0.349	
	Kiambu	G	G2	D400	LOOP	2	Gravel	Fair	2.286	
	Kiambu	G	G2A	G2	Dead End	2	Gravel	Fair	0.771	
	Kiambu	G	G2B	G2A	G2	2	Gravel	Fair	0.591	
	Kiambu	G	G2C	G2 (S. End)	G2 (N. End)	2	Gravel	Fair	0.828	
	Kiambu	G	G2D	G2	Dead End	2	Earth	Fair	0.204	
	Kiambu	G	G2E	G2	Dead End	2	Earth	Fair	1.146	6.380
108	<b>Thika Municipality</b>									
	Thika	G	G3203	A3	THIKA-HIGH-SCH	2	Surface Dressing	Poor	1.3254	
	Thika	G	G3203	A3	THIKA-HIGH-SCH	2	Earth	Poor	0.1566	
	Thika	G	G3204	G3203	THIKA-TECH	2	Surface Dressing	Poor	0.9771	
	Thika	G	G3205	G3204	HOSPITAL	2	Surface Dressing	Fair	0.2403	
	Thika	G	G3205	G3204	HOSPITAL	2	Gravel	Fair	0.3971	3.097
109	<b>Kiambaa S/Area</b>									
	Kiambu	G	G6	D409	HOSPITAL	2	Surface Dressing	Fair	0.215	
	Kiambu	G	G6	D409	HOSPITAL	2	Gravel	Fair	0.261	0.476
110	<b>Limuru</b>									
	Kiambu	G	G7	D409	D. OFFICE	2	Surface Dressing	Good	0.465	0.465
111	<b>Kiambaa</b>									
	Kiambu	G	G9	C63 (W. End)	C63 (E. End)	2	Surface Dressing	Fair	0.915	0.915
										<b>Total G</b>
										<b>14.535</b>

TABLE 4.3-1 ROAD LENGTH DATA

No.	DISTRICT	CLASS	NUM	FROM	TO	LANES	SURFTYPE	SURFCOND	LENG(KM)	SEC TOTAL(KM)
112	Kivaani Machakos	R	R10	C98	C100	2	Gravel	Fair	6.200	6.200
113	Kikuyu Kiambu	R	R21 R21A	E422 E422	R21A E1506	2 1	Gravel Gravel	Poor Poor	3.349 1.186	4.534
114	Rironi Kiambu	R	R22	E1504	R24	2	Gravel	Fair	1.956	1.956
115	Rironi Kiambu	R	R24	R22	A104	2	Gravel	Poor	2.755	2.755
116	Kikuyu Kiambu Kiambu Kiambu Kiambu Kiambu Kiambu	R R R R R R	R25 R25 R25 R25 R25 R25	E422 E422 E422 R28 E1504 E1504	R28 R28 R28 E1504 R22	1 2 1 1 2	Earth Earth Earth Earth Earth	Poor Poor Poor Poor Fair	2.350 0.587 2.635 0.832 0.891	7.295
117	Kyeleni Machakos Machakos Machakos Machakos	R R R R	R27 R27 R27 R27	D521 D521 D521 D521	D521 D521 D521 D521	2 2 2 2	Gravel Gravel Gravel Gravel	Fair Fair Very Poor Very Poor	12.037 0.010 14.039 0.007	26.092
118	Kikuyu Kiambu Kiambu Kiambu Kiambu Kiambu	R R R R R	R28 R28 R28 R28 R28	R20A R20 R20A E1504 R20A	E1504 R20A E1504 A104 E1504	1 1 2 1 2	Earth Earth Gravel Gravel Earth	Poor Poor Fair Fair Poor	0.512 0.767 1.328 0.835 1.685	5.127
119	Ruaka Kiambu Kiambu	R R	R42 R42	C63 C63	Dead End Dead End	1 1	Gravel Gravel	Fair Poor	1.780 1.558	3.338
									<b>Total R</b>	<b>57.297</b>
110	Kajiado Kiambu	<b>Ngong</b> U U	Unk-1 Unk-1	C60 D401	Dead End Dead End	2 2	Earth Earth	Good Very Poor	4.767 1.095	5.862
									<b>Total Unk</b>	<b>5.862</b>
									<b>Total</b>	<b>1,422.138</b>
									Special Purposes	77.694

TABLE 4.3-2 MOPWH CLASSIFIED ROADS IN STUDY AREA

Summary	Study Area	Nairobi City
Road Length (Km)		
A	177.643	40.328
B	3.962	3.962
C	329.773	118.404
D	300.480	35.852
E	532.586	4.175
SP(G/R/Unk)	77.694	202.721
Total	1422.138	
G	14.535	
R	57.297	
Unk	5.862	
	12.5%	
	0.3%	
	23.2%	
	21.1%	
	37.4%	
	5.5%	
	100%	
	1.0%	
	4.0%	
	0.4%	

Road Numbers	Study Area	Nairobi City
A	4	
B	1	
C	15	
D	21	
E	63	
G	7	
R	8	
Unk	1	
Total	120	
SP(G/R/Unk)	16	

TABLE 4.3-3 MPWH CLASSIFIED ROADS IN STUDY AREA

<b>Mombasa Road</b>						
Nairobi	A	A104	DB Machakos	Start of Dual C	1.166	1.166
<b>Uhuru Highway/Waiyaki Way</b>						
Nairobi	A	A104N	<b>A104</b>	<b>B10</b>	1.184	Nairobi City
Nairobi	A	A104N	B10	C89	2.188	
Nairobi	A	A104N	<b>C58</b>	<b>C61 central</b>	<b>8.190</b>	
Nairobi	A	A104N	<b>C58</b>	<b>C61 central</b>	<b>0.021</b>	
Nairobi	A	A104N	<b>C58</b>	<b>C61 central</b>	<b>0.169</b>	
Nairobi	A	A104N	<b>C58</b>	<b>C61 central</b>	<b>0.212</b>	
Nairobi	A	A104N	<b>C58</b>	<b>C61 central</b>	<b>1.159</b>	
Nairobi	A	A104N	<b>C61 central</b>	<b>C61 north</b>	<b>13.820</b>	
Nairobi	A	A104N	<b>C61 north</b>	<b>DB Kiambu</b>	<b>1.213</b>	28.156
						29.322
<b>Thika Road</b>						
Nairobi	A	A2S	A2 Muthaiga	C59	3.516	Nairobi city
Nairobi	A	A2S	C59	C59	0.095	
Nairobi	A	A2S	C59	DB Thika	7.391	
Nairobi	A	A2S	Pangani	DB Thika	0.004	11.006
<b>Airport Road</b>						
Nairobi	B	B10E	<b>A104S</b>	<b>C59</b>	1.632	
Nairobi	B	B10E	<b>C59</b>	<b>JKIA</b>	0.286	
Nairobi	B	B10W	<b>A104N</b>	<b>A104S</b>	0.442	
Nairobi	B	B10W	<b>A104S</b>	<b>C59</b>	1.270	
Nairobi	B	B10W	<b>C59</b>	<b>JKIA</b>	0.332	3.962
					<b>Total B</b>	<b>3.962</b>
<b>Magadi Road</b>						
Nairobi	C	C58	<b>DB Kajiado</b>	<b>C63</b>	3.303	
Nairobi	C	C58	<b>DB Kajiado</b>	<b>C63</b>	1.415	
Nairobi	C	C58	<b>C63</b>	<b>C58N</b>	1.833	6.551
<b>Langata Road</b>						
Nairobi	C	C58S	<b>C58</b>	<b>Mb RdN</b>	4.751	
Nairobi	C	C58S	<b>Mb Rd</b>	<b>A104N</b>	1.539	
Nairobi	C	C58S	<b>A104N</b>	<b>A104S</b>	0.049	6.339
Nairobi	C	Mb RdN	C58	C61	2.951	
Nairobi	C	Mb RdN	C58	C61	0.084	
Nairobi	C	Mb RdS	C58	C61	2.931	5.966
<b>Outer Ring Road</b>						
Nairobi	C	C59	<b>B10E</b>	<b>C89</b>	2.738	
Nairobi	C	C59	<b>B10E</b>	<b>C89</b>	0.130	
Nairobi	C	C59	<b>C89</b>	<b>C98</b>	5.958	
Nairobi	C	C59	<b>C89</b>	<b>C98</b>	1.324	
Nairobi	C	C59	<b>B10</b>	<b>A2</b>	0.053	
Nairobi	C	C59	<b>C98</b>	<b>A2N</b>	2.861	
Nairobi	C	C59	<b>A2S</b>	<b>A2N</b>	0.104	
Nairobi	C	C59	<b>C59</b>	<b>C59</b>	0.135	
Nairobi	C	C59	<b>A2N</b>	<b>A2S</b>	0.096	13.399
<b>Ngong Road</b>						
Nairobi	C	C60	A104	D523	3.458	
Nairobi	C	C60	A104	DB Kajiado	5.656	
Nairobi	C	C60	A104	DB Kajiado	0.028	
Nairobi	C	C60	A104	DB Kajiado	1.408	10.550
<b>Naivasha Road/Ngong Road</b>						
Nairobi	C	C61	A104	C60	3.606	
Nairobi	C	C61	Mbagathi Rd	C60	0.763	
Nairobi	C	C61	A104	Mbagathi Rd	2.176	
Nairobi	C	C61	C60	A104	7.211	
Nairobi	C	C61	C60	A104		13.756

TABLE 4.3-3 MPWH CLASSIFIED ROADS IN STUDY AREA

<b>Limuru Road</b>						
Nairobi	C	C62	FOREST ROAD	DB KIAMBU	10.185	10.185
Nairobi	C	C63	C68	D412	7.384	
Nairobi	C	C63	C60	D412	6.458	13.842
<b>Airport North Road</b>						
Nairobi	C	C89	A104	DB	1.560	
Nairobi	C	C89	A104	APTC	0.921	
Nairobi	C	C89	A104	APTC	7.032	9.5130
<b>Koma Rock Road</b>						
Nairobi	C	C98	C59	DB	2.758	
Nairobi	C	C98	C59	DB	1.694	
Nairobi	C	C98	C59	DB	20.280	24.732
Nairobi	C	JUJA	C59	PANGANI		
Nairobi	C	JUJA	C59	PANGANI	3.571	3.571
<b>C98 (Njiru) A2 ( Githurai) to C63 (Kahawa)</b>						
Nairobi	D	D400	C98	A2	5.513	
Nairobi	D	D400	C98	A2	2.465	
Nairobi	D	D400	C98	DB Kiambu	0.149	
Nairobi	D	D400	A2	DB Kiambu	4.671	12.798
<b>D400 (Githurai) C64 (Kambaa S/Area) C63 (Riabai) to Study Border (Karanbaini) D407 to A104(Limuru)</b>						
Nairobi	D	D409	D400	C64	7.387	
<b>A104 (Parkland) to C63 (Kabete)</b>						
Nairobi	D	D410	A104	DB Kiambu	8.991	
<b>C61 (Waitaka) to C63 (Kinoo)</b>						
Nairobi	D	D412	C61	DB Kiambu	5.597	
Nairobi	D	D412	C61	DB Kiambu	1.079	6.676
<b>D411 (Kinoo) E418 (Ngong) Ngong</b>						
Nairobi	E	E1499B	DB	Dead End	3.062	
Nairobi	E	E1499B	DB	Dead End	1.113	4.175



**TABLE 4.3-4 (1) ROAD INVENTORY IN DAGORETTI**

**AREA:** Nairobi

**ZONE:** Dagoretti

**GIBB AFRICA**

**ROAD INVENTORY**

Road name or number	Unique ROAD CODE	Section or link description	Section or link chainage (km) (x.xx)	Section or link length	Ave. Width	Road type (paved/unpaved)	Road Class (H/P/D/L/A/C)	urban or rural (U/R)	Public Transport Route (B/M/T)	Carriageway condition	Sheet No.
01. Dagoretti Rd. R2	NCC 0001	Kar. Rd	0.00	0.21	3.30	U(E)	A	U		B	0001
02. Kangemi Rd A	NCC 0002	Wai. Way	0.00	1.15	3.30	P	A	U	M	B	0002
03. Kangemi Rd. B	NCC 0003	Kan. Rd A	0.00	0.88	5.30	P	C	U	M	B	0003
04. Kangemi Rd. C	NCC 0004	Kan. Rd B	0.00	0.08	3.30	U(G)	C	U		F	0004
05. Kangemi Rd. D	NCC 0005	Kan. Rd B	0.00	0.47	4.30	U(E)	C	U		B	0005
06. Kangemi Rd. E	NCC 0006	Kan. Rd B	0.00	0.10	3.30	U(G)	C	U		B	0006
Kangemi Rd. E	NCC 0006	Kan. Rd B	0.10	0.21	3.30	U(E)	C	U		B	0006
07. Kangemi Rd. F	NCC 0007	Kan. Rd B	0.00	0.31	3.30	U(E)	C	U		B	0007
08. Kangemi Rd. G	NCC 0008	Kan. Rd A	0.00	0.83	6.30	P	A	U	M	F	0008
09. Kangemi Rd. H	NCC 0009	Kan. Rd G	0.00	0.05	3.50	U(G)	C	U		B	0009
Kangemi Rd. H	NCC 0009	Kan. Rd G	0.05	0.10	3.50	U(E)	C	U		B	0009
10. Kangemi Rd. J	NCC 0010	Kan. Rd A	0.00	0.48	3.30	U(E)	A	U		B	0010
11. Kangemi Rd. K	NCC 0011	Rd M	0.00	0.62	3.30	U(E)	C	U		B	0011
12. Kangemi Rd. M	NCC 0012	Kan. Rd A	0.00	1.60	4.30	U(E)	C	U		B	0012
13. Kawangware Rd. A	NCC 0013	S.C. End	0.00	0.32	4.00	U(E)	A	U		B	0013
14. Kawangware Rd. B	NCC 0014	Git. Rd	0.00	0.11	4.00	U(E)	C	U		B	0014
15. Kawangware Rd. C	NCC 0015	Git. Rd	0.00	0.59	5.80	P	A	U		B	0015
16. Kawangware Rd. D	NCC 0016	Kaw. Rd. C	0.00	0.24	4.00	U(E)	C	U		B	0016
17. Kawangware Rd. E	NCC 0017	Git. Rd	0.00	1.26	7.10	P	A	U		B	0017
18. Kawangware Rd. G	NCC 0018	MM. Brg.	0.00	3.18	4.00	U(E)	A	U	M	B	0018
19. Kawangware Rd. H	NCC 0019	Kaw. Rd. J	0.00	0.22	4.00	U(E)	A	U		B	0019
20. Kawangware Rd. I	NCC 0020	Kaw. Rd. G	0.00	0.44	4.00	U(E)	A	U		B	0020
21. Kawangware Rd. J	NCC 0021	Kaw. Rd G	0.00	2.65	4.00	U(E)	C	U		B	0021
22. Mt. View Est. Rd. 1	NCC 0022	MM. Brg.	0.00	2.94	4.00	U(E)	A	U	B	B	0022
23. Mt. View Est. Rd. 10	NCC 0023	End Rd. 8	0.00	0.54	5.30	P	A	U		F	0023
24. Mt. View Est. Rd. 11	NCC 0024	M.V.E. Rd 2	0.00	0.09	5.60	P	A	U	M	F	0024
25. Mt. View Est. Rd. 12	NCC 0025	St. J. Hosp.	0.00	1.10	5.25	P	L	U	M	F	0025
26. Mt. View Est. Rd. 13	NCC 0026	M.V.E. Rd 2	0.00	0.19	6.10	P	A	U		F	0026
27. Mt. View Est. Rd. 14	NCC 0027	M.V.E. Rd 13	0.00	0.15	5.50	P	C	U		F	0027
28. Mt. View Est. Rd. 2	NCC 0028	Wai. Way	0.00	1.74	5.30	P	L	U	B	F	0028
29. Mt. View Est. Rd. 3	NCC 0029	M.V.E. Rd 2	0.00	0.17	5.20	P	A	U		F	0029
30. Mt. View Est. Rd. 4	NCC 0030	M.V.E. Rd 3	0.00	0.08	6.10	P	C	U		F	0030
31. Mt. View Est. Rd. 5	NCC 0031	M.V.E. Rd 2	0.00	0.26	5.20	P	C	U		F	0031

**TABLE 4.3-4 (1) ROAD INVENTORY IN DAGORETTI**

**AREA:** Nairobi

**ZONE:** Dagoretti

**GIBB AFRICA**

**ROAD INVENTORY**

Road name or number	Unique ROAD ABC (abcdj)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	urban or rural (U/R)	Public Transport (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
32. Mt. View Est. Rd 6	NCC 0032	M.V.E. Rd 2	End	0.00	0.30	0.30	5.80	P	C	U	M	F	0032
33. Mt. View Est. Rd 7	NCC 0033	M.V.E. Rd 6	M.V.E. Rd 5	0.00	0.63	0.63	5.90	P	A	U	M	F	0033
34. Mt. View Est. Rd 8	NCC 0034	M.V.E. Rd 2	M.V.E. Rd 10	0.00	0.16	0.16	5.50	P	L	U		F	0034
35. Mt. View Est. Rd 9	NCC 0035	M.V.E. Rd 8	End	0.00	0.07	0.07	5.30	P	C	U		F	0035
36. R. Satellite Rd A	NCC 0036	Kin. Rd.	Kin. Rd	0.00	0.44	0.44	5.00	P	A	U		F	0036
37. R. Satellite Rd B	NCC 0037	Kab. Rd	Naiv. Rd	0.00	0.40	0.40	4.40	P		U		F	0037
R. Satellite Rd. B	NCC 0037	Kab. Rd	Naiv. Rd	0.40	1.02	0.62	4.40	U(G)		U		B	0037
38. R. Satellite Rd C	NCC 0038	Kin. Rd.	R.S. Rd D	0.00	0.13	0.13	5.00	P	A	U		F	0038
39. R. Satellite Rd D	NCC 0039	Naiv. Rd	R.S. Rd C	0.00	0.12	0.12	4.80	U(G)		U		B	0039
40. Dagoretti Hs. Rd	NCC 0040	Kik. Rd	Kar. Rd	0.00	0.36	0.36	5.30	P	A	U		F	0040
41. Githiora Road	NCC 0041	Naiv. Rd	MM. Brg.	0.00	0.44	0.44	4.00	U(E)		U		B	0041
42. Kabiria Road	NCC 0042	Dag. Rd	Kin. Rd	0.00	1.44	1.44	5.00	P	A	U	B	F	0042
Kabiria Road	NCC 0042	Dag. Rd	Kin. Rd	1.44	6.82	5.38	5.00	U(G)	A	U	B	B	0042
43. Kangemi Bypass	NCC 0043	Wai. Way	Wai. Way	0.00	0.59	0.59	4.30	P	A	U	B	F	0043
44. Kariudini Road	NCC 0044	Naiv. Rd	Kar. Rd	0.00	0.60	0.60	5.00	P		U		F	0044
45. Karugu Road	NCC 0045	Dag Hs. Rd	Rut. PS	0.00	0.54	0.54	3.20	P	A	U		F	0045
Karugu Road	NCC 0045	Dag Hs. Rd	Rut. PS	0.54	1.71	1.17	3.20	U(E)	A	U		F	0045
46. Kawangware Road	NCC 0046	Naiv. Rd	Git. Rd	0.00	0.39	0.39	4.00	U(E)	A	U	M	B	0046
47. Kihumbuini Sch. Rd.	NCC 0047	Kan. Rd G	Klh. Sch.	0.00	0.05	0.05	6.40	P	A	U		F	0047
48. Kikuyu Road	NCC 0048	Dag. Mkt.	Naiv. Rd	0.00	5.70	5.70	6.40	P	L	U	B	F	0048
49. Kinyanjui Road	NCC 0049	Naiv. Rd	Naiv. Rd	0.00	1.87	1.87	4.00	P	A	U	M	F	0049
50. Naivasha Road	NCC 0050	Ngo. Rd	City B	0.00	6.05	6.05	6.80	P	P	U	B	F	0050
51. Ndaru Road	NCC 0051	Kik. Rd	Naiv. Rd	0.00	2.20	2.20	3.30	P	A	U		F	0051
52. Ngong Road	NCC 0052	For. St	Naiv. Rd	0.00	3.42	3.42	6.30	P		U	B	F	0052
53. Ngotho Road	NCC 0053	Kin. Rd.	Kab. Rd	0.00	1.34	1.34	5.00	P	A	U	M	F	0053
54. Waitihaka Crescent	NCC 0054	Kik. Rd	Kik. Rd	0.00	1.00	1.00	3.30	P	A	U		F	0054
55. Wangai Road	NCC 0055	Kag. PS	Dag. HS	0.00	1.00	1.00	3.50	U(E)	A	U		B	0055
56. Wanyee Road	NCC 0056	Ngot. Rd.	Naiv. Rd	0.00	1.60	1.60	5.00	P	A	U	B	F	0056

**TABLE 4.3-4 (2) ROAD INVENTORY IN EMBAKASI  
ZONE: Embakasi**

**AREA: Nairobi**

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/MT)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
57. Embakasi Vil. Rd. A	NCC 0057	Emb. Rd	Emb. Rd	0.00	0.23	0.23	4.00	P	A	U	M	F	0057
58. Embakasi Vil. Rd. B	NCC 0058	Emb. Rd	Emb. Rd	0.00	0.31	0.31	4.00	P	A	U	M	F	0058
59. Embakasi Vil. Rd. C	NCC 0059	Emb. Rd	End	0.00	0.33	0.33	3.50	P	C	U		F	0059
60. Embakasi Vil. Rd D	NCC 0060	E.Vil. Rd C	Emb. Rd	0.00	0.22	0.22	4.00	P		U		F	0060
61. Villa Franca Rd. 1	NCC 0061	Ent. Rd	Msa. Rd	0.00	0.75	0.75	6.70	P	D	U	M	F	0061
Villa Franca Rd. 1	NCC 0061	Ent. Rd	Msa. Rd	0.75	2.08	1.33	6.70	U(E)	D	U	M	B	0061
62. Villa Franca Rd. 1a	NCC 0062	V/Fr. Rd 1	End	0.00	0.83	0.83	4.00	U(E)	C	U	M	B	0062
63. Villa Franca Rd. 1b	NCC 0063	V/Fr. Rd 1	Ent. Rd.	0.00	1.07	1.07	4.00	U(E)	A	U	M	B	0063
64. Villa Franca Rd. 1c	NCC 0064	Ent. Rd	V/Fr Rd. 1b	0.00	0.27	0.27	4.00	U(E)	A	U	M	B	0064
65. Villa Franca Rd. 1d	NCC 0065	V/Fr. Rd 1	End	0.00	0.28	0.28	7.60	U(E)	C	U		B	0065
66. Villa Franca Rd. 1e	NCC 0066	V/Fr. Rd 1	End	0.00	0.16	0.16	7.00	P	C	U		F	0066
67. Villa Franca Rd. 1f	NCC 0067	V/Fr. Rd 1	End	0.00	0.25	0.25	7.00	P	C	U		F	0067
68. Villa Franca Rd. 1g	NCC 0068	V/Fr. Rd 1	End	0.00	0.19	0.19	4.00	U(E)	C	U		B	0068
69. Villa Franca Rd. B	NCC 0069	Ent. Rd	Dia. T. Qu	0.00	1.38	1.38	4.00	U(E)	C	U		B	0069
70. Villa Franca Rd. B1	NCC 0070	V/Fr. Rd 1	End	0.00	0.69	0.69	4.00	U(E)	C	U		B	0070
71. Villa Franca Rd. B2	NCC 0071	V/Fr. Rd 1	End	0.00	0.20	0.20	4.00	U(E)	C	U		B	0071
72. Airport North Road	NCC 0072	Apt. Gate	Msa. Rd	0.00	4.38	4.38	6.90	P	D	U	B	F	0072
73. Airport South Road	NCC 0073	Msa. Rd	Apt. N. Rd	0.00	4.35	4.35	8.20	P	D	U	B	B	0073
74. Embakasi GSU Rd	NCC 0074	City B	Emb. V	0.00	5.32	5.32	6.40	P	D	U	M	F	0074
75. Embakasi Road	NCC 0075	Emb. Rd	Apt. N. Rd	0.00	3.03	3.03	7.00	P	D	U	B	F	0075
76. Enterprise Road	NCC 0076	Msa. Rd	Ngo. Rd	0.00	1.86	1.86	7.00	P	P	U	B	F	0076
77. Mombasa Road	NCC 0077	City B	B. V. Brg.	0.00	10.34	10.34	15.00	P	H	U	B	F	0077
78. Outer Ring Road	NCC 0078	Apt. N. Rd	Jog. Rd	0.00	3.22	3.22	7.40	P	D	U	B	B	0078

**TABLE 4.3-4 (3) ROAD INVENTORY IN KAMUKUNJI**

**ZONE: Kamukunji**

**AREA: Nairobi**

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet No.
		Start (from)	End (to)	Start (from)	End (to)								
79. 2nd St-Juja Road P.O	NCC 0079	2 St. Est.	Ju. Rd. PO	0.00	0.06	0.06	4.00	P		U		F	0079
"	NCC 0079	2 St. Est.	Ju. Rd. PO	0.06	0.23	0.17	4.00	U(E)		U		F	0079
80. Adi-Mafuududu Rd.	NCC 0080	Adi Rd.	Muf. Rd	0.00	0.29	0.29	5.50	P		U	M	F	0080
81. Adi-Wangu Rd.	NCC 0081	Adi Rd.	Wan. Rd	0.00	0.44	0.44	5.10	P	A	U	M	F	0081
82. Bahati Rd. 10	NCC 0082	Ram. Rd	Rd. 9	0.00	0.13	0.13	4.60	P		U		F	0082
83. Bahati Rd. 9	NCC 0083	Ram. Rd	Bah. Cre.	0.00	0.20	0.20	6.90	P		U		B	0083
84. Digo-K/Kunji Rd.	NCC 0084	Dig. Rd	Kam. Rd.	0.00	0.28	0.28	4.80	P		U		B	0084
85. Eastleigh Rd. 7	NCC 0085	1 Av. Eas.	Oi. S. St.	0.00	0.78	0.78	4.00	U(E)	A	U	M	B	0085
86. Eastleigh Rd. 8	NCC 0086	17 St. Eas.	Rd. 7	0.00	0.28	0.28	5.80	P	A	U	M	F	0086
87. Jogoo-Sakwa Rd.	NCC 0087	Jog. Rd	Sak. Rd	0.00	0.30	0.30	8.00	P		U	M	B	0087
88. K/Kunji-Sakwa Rd.	NCC 0088	Kam. Rd	Sak. Rd	0.00	0.22	0.22	6.00	P		U	M	F	0088
"	NCC 0088	Kam. Rd	Sak. Rd	0.22	0.53	0.31	6.00	U(E)		U		F	0088
89. Fr. Buru Buru Rd.	NCC 0089	Nile Rd	Rab. Rd	0.00	0.19	0.19	4.90	P		U		B	0089
90. Fr. Heshima Rd. 13	NCC 0090	Hes. Av.	Wan. Rd	0.00	0.52	0.52	5.40	P		U	M	B	0090
91. Fr. A/Force Fence	NCC 0091	A/F Fen.	2 Av. Eas	0.00	0.33	0.33	4.00	U(E)	A	U	M	B	0091
92. Fr. Bahati Cr. 11	NCC 0092	Bah. Cr.	Kaj. Lane	0.00	0.24	0.24	4.30	P		U	M	B	0092
93. Fr. Bahati Rd. 12	NCC 0093	Bah. Cr.	Mba. Rd.	0.00	0.35	0.35	4.40	P		U	M	B	0093
94. Fr. Marimbi St. Rd. 1	NCC 0094	Mar. St.	End	0.00	0.08	0.08	4.80	P	C	U		B	0094
95. Fr. Marimbi St. Rd. 2	NCC 0095	Mar. St.	End	0.00	0.11	0.11	4.70	P	C	U		B	0095
96. Fr. Marimbi St. Rd. 3	NCC 0096	Mar. St.	End	0.00	0.14	0.14	4.70	P	C	U		B	0096
97. Fr. Marimbi St. Rd. 4	NCC 0097	Mar. St.	End	0.00	0.16	0.16	4.70	P	C	U		B	0097
98. Fr. Marimbi St. Rd. 5	NCC 0098	Mar. St.	End	0.00	0.15	0.15	4.70	P	C	U		B	0098
99. Fr. Mumias St. Rd. 28	NCC 0099	Mum. St.	End	0.00	0.61	0.61	5.20	P	C	U	M	B	0099
100. 11th Street	NCC 0100	1 Av. Eas.	End	0.00	0.33	0.33	6.40	P	C	U	M	B	0100
101. 12th Street	NCC 0101	1 Av. Eas.	End	0.00	0.32	0.32	5.40	P	C	U	M	F	0101
102. 13th Street	NCC 0102	2 Av. Eas.	End Mow	0.00	0.14	0.14	9.20	P	A	U	B	F	0102
103. 14th Street	NCC 0103	1 Av. Eas.	2 Av. Eas	0.00	0.25	0.25	10.90	U(E)	A	U		B	0103
104. 17th Street	NCC 0104	Rd. 8	18th St.	0.00	0.30	0.30	6.70	P	A	U		F	0104
"	NCC 0104	Rd. 8	18th St.	0.30	0.55	0.25	6.70	U(E)	A	U		B	0104
105. 18th Street	NCC 0105	1 Av. Eas.	Muf. St.	0.00	0.80	0.80	6.70	P	A	U		F	0105
106. 1st Ave. E/Leigh (1)	NCC 0106	Rua. Rd	972 G. Rd	0.00	0.97	0.97	8.30	P	L	U	B	B	0106
107. 1st Ave. E/Leigh (2)	NCC 0107		972 2103 UC	0.00	1.13	1.13	8.30	P	L	U	B	B	0106
108. 1st Ave. E/Leigh (3)	NCC 0108		2103 Juja. Rd.	0.00	1.00	1.00	8.30	P	L	U	B	B	0106

**TABLE 4.3-4 (3) ROAD INVENTORY IN KAMUKUNJI**

**ZONE:** Kamukunji

**AREA:** Nairobi

**GIBB AFRICA**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
109. 2nd Ave. E/Leigh (1)	NCC 0109	Juja Rd.	End	0.00	1.45	1.45	9.20	P	C	U	B	B	0107
110. 2nd Ave. E/Leigh (2)	NCC 0110			0.00	0.40	0.40	9.20	P	L	U	B	B	0108
111. 2nd St. E/Leigh	NCC 0111	1 Av. Eas.	End	0.00	0.25	0.25	7.10	P	C	U		F	0109
"	NCC 0111	1 Av. Eas.	End	0.25	0.79	0.54	7.10	U(E)	C	U		F	0109
112. 3rd Ave. E/Leigh	NCC 0112	Juja Rd.	13th St.	0.00	0.16	0.16	5.30	P	A	U	M	F	0110
"	NCC 0112	Juja Rd.	13th St.	0.16	1.25	1.09	5.30	U(E)	A	U	M	F	0110
113. 4th Street	NCC 0113	1 Av. Eas.	M. W. Sch.	0.00	0.24	0.24	5.70	P	A	U		F	0111
"	NCC 0113	1 Av. Eas.	M. W. Sch.	0.24	0.44	0.20	5.70	U(E)	A	U		F	0111
114. 5th Street	NCC 0114	1 Av. Eas.	C of C.	0.00	0.45	0.45	5.60	P	A	U	M	F	0112
115. 6th Street	NCC 0115	1 Av. Eas.	End	0.00	0.16	0.16	5.60	P	C	U		F	0113
"	NCC 0115	1 Av. Eas.	End	0.16	0.41	0.25	5.60	U(E)	C	U		F	0113
116. 7th Street E/Leigh	NCC 0116	1 Av. Eas.	3 Av. Eas.	0.00	0.40	0.40	5.30	P	A	U	M	B	0114
117. 8th St. E/Leigh	NCC 0117	1 Av. Eas.	3 Av. Eas.	0.00	0.40	0.40	5.30	P	A	U	M	F	0115
118. 9th St. E/Leigh	NCC 0118	1 Av. Eas.	3 Av. Eas.	0.00	0.30	0.30	5.50	P	A	U	M	F	0116
"	NCC 0118	1 Av. Eas.	3 Av. Eas.	0.30	0.39	0.09	5.50	U(E)	A	U		F	0116
119. Adi Road	NCC 0119	Wan. Av	Maf. Rd	0.00	0.54	0.54	5.40	P	A	U	M	B	0117
120. Ahero Road	NCC 0120	Bon. St.	Lor. Rd	0.00	0.48	0.48	6.00	P	A	U	M	B	0118
121. Ajuoga Lane	NCC 0121	Aj. Rd.	Adi. Rd	0.00	0.09	0.09	4.80	P	A	U		B	0119
122. Ajuoga Road	NCC 0122	Niile Rd.	End	0.00	0.32	0.32	4.80	P	C	U		B	0120
123. Alego Lane	NCC 0123	Kil. Rd.	Voi Rd	0.00	0.11	0.11	4.40	P	A	U		B	0121
124. Ambira Road	NCC 0124	Bon. St.	Rua. Rd	0.00	0.75	0.75	8.00	P	A	U	M	B	0122
125. Asembo Lane	NCC 0125	Kil. Rd.	Voi Rd	0.00	0.11	0.11	4.40	P	A	U		B	0123
126. Buruburu Rd. (pt.1)	NCC 0126	Wan. Av	Rab. Rd	0.00	0.72	0.72	6.60	P	A	U	B	B	0124
127. Buruburu Rd. (pt.2)	NCC 0127	Rab. Rd.	Rab. Rd	0.00	0.53	0.53	6.60	P	A	U	B	B	0125
128. Bahati Crescent	NCC 0128	Hes. Av.	Hes. Rd	0.00	0.89	0.89	4.30	P	A	U	M	B	0126
129. Baticuba Street	NCC 0129	Mar. St	1 Av. Eas.	0.00	0.06	0.06	5.40	P	A	U		F	0127
"	NCC 0129	Mar. St	1 Av. Eas.	0.06	0.37	0.31	5.40	U(E)	A	U		B	0127
130. Bondo Street	NCC 0130	Jog. Rd.	But. Sq.	0.00	0.36	0.36	6.00	P	A	U		B	0128
131. Buruburu Cre.	NCC 0131	B/B Rd	B/B Rd	0.00	0.33	0.33	4.50	P	A	U		B	0129
132. Busagwa Lane	NCC 0132	1 Av. Eas.	2 Av. Eas.	0.00	0.16	0.16	4.00	P	A	U		B	0130
133. Butecho Road	NCC 0133	Lam. Rd.	Bon. St.	0.00	0.24	0.24	5.00	P	A	U		B	0131
134. Butecho Square	NCC 0134	Sak. Rd	Bon. St.	0.00	0.26	0.26	6.00	P	A	U		B	0132
135. Captain Mungai St.	NCC 0135	Juja Rd.	End	0.00	1.07	1.07	4.00	U(E)	C	U		B	0133

**TABLE 4.3-4 (3) ROAD INVENTORY IN KAMUKUNJI**

**ZONE: Kamukunji**

**AREA: Nairobi**

**GIBB AFRICA**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
136. Charangani Av	NCC 0136	18th St.	MW. St.	0.00	0.14	0.14	4.00	U(E)		U		B	0134
137. Digo Road	NCC 0137	Mui. St.	Pum. St.	0.00	1.02	1.02	6.40	P	A	U	M	B	0135
138. Eastlands Cre.	NCC 0138	Jog. Rd.	Nya. Rd.	0.00	0.30	0.30	6.90	U(G)	A	U		B	0136
"	NCC 0138	Jog. Rd.	Nya. Rd.	0.30	0.61	0.31	6.90	U(E)	A	U		B	1336
139. Eldoret Road	NCC 0139	18th St.	Wan. Av.	0.00	0.89	0.89	6.80	P		U	M	B	0137
140. Embakasi Cre.	NCC 0140	Voi. Lane	Ruv. Rd	0.00	0.27	0.27	5.30	P	A	U		B	0138
141. Galole Road	NCC 0141	1 Av. Eas.	A/F. Fen.	0.00	0.41	0.41	5.40	U(E)	A	U		B	0139
142. Heshima Avenue	NCC 0142	Wa/N Rd.	Ram. Rd	0.00	0.82	0.82	7.60	P	L	U		B	0140
143. Jogoo Road	NCC 0143	Lan. Rd	D/R. Rd	0.00	1.60	1.60	20.00	P		U	B	B	0141
144. Juja Road (pt.1)	NCC 0144	Rin. Rd	3 Av. Eas.	0.00	2.01	2.01	7.80	P	P	U	B	B	0142
145. Juja Road (pt.2)	NCC 0145	3 Av. Eas.	O/R. Rd	0.00	2.92	2.92	7.80	P	P	U	B	B	0143
146. Kahado Road	NCC 0146	Bah. Cr.	Bah. Cr.c.	0.00	0.35	0.35	3.90	P		U		B	0144
147. Kahawa Lane	NCC 0147	Bah. Cr.	Bah. Cr.c.	0.00	0.32	0.32	4.30	P	A	U		B	0145
148. Kamukunji Road	NCC 0148	Kam. Rd	Digo Rd.	0.00	0.85	0.85	6.00	U(E)	A	U		B	0146
149. Karakuta Road	NCC 0149	Voi Rd.	Kti. Rd.	0.00	0.11	0.11	4.40	P	A	U		B	0147
150. Kericho Road	NCC 0150	Ah. St	But. Sq.	0.00	0.18	0.18	6.00	P	A	U		B	0148
"	NCC 0150	Ah. St	But. Sq.	0.18	0.31	0.13	6.00	U(E)	A	U		B	0148
151. Kiroe Street	NCC 0151	G.W. St	Mar. St.	0.00	0.06	0.06	5.80	P	A	U		B	0149
"	NCC 0151	G.W. St	Mar. St.	0.06	0.37	0.31	5.80	U(E)	A	U		B	0149
152. Kirongothi Street	NCC 0152	Juja Rd	End	0.00	0.95	0.95	4.00	U(E)	C	U		B	0150
153. Kisii Street	NCC 0153	Lamu. Rd	Digo Rd.	0.00	0.50	0.50	10.00	U(E)	A	U		B	0151
154. Kisiwa Lane	NCC 0154	Kil. Rd	Voi. Rd	0.00	0.11	0.11	4.30	P	A	U		F	0152
155. Kitale Lane	NCC 0155	Kil. Rd	Kti. Rd.	0.00	0.10	0.10	4.40	P	A	U		F	0153
156. Kitale Road	NCC 0156	Rat. Cre.	Kti. Rd.	0.00	0.79	0.79	4.80	P	A	U		B	0154
157. Kunguru Street	NCC 0157	I.A.V. Eas.	Mur. Rd	0.00	0.45	0.45	4.00	U(E)		U		B	0155
158. Kwamu Lane	NCC 0158	I.A.V. Eas.	2 Av. Es.	0.00	0.16	0.16	5.10	P		U		B	0156
159. Kiyoga Crescent	NCC 0159	Rui. Cre.	Rui. Cre.	0.00	0.34	0.34	4.60	P	A	U		F	0157
160. Lamu Road	NCC 0160	But. Sq.	Digo Rd.	0.00	0.44	0.44	8.00	P	A	U	M	B	0158
161. Lamu Road	NCC 0161	Mun. Rd	But. Rd	0.00	0.24	0.24	5.50	P	A	U	M	B	0159
162. Landhies Road	NCC 0162	H/S. Av.	Jog. Rd	0.00	1.25	1.25	24.00	P	A	U	B	F	0160
163. Lorian Road	NCC 0163	Sak. Rd	Ahe. Rd	0.00	0.26	0.26	4.00	P	A	U		F	0161
164. Major Kinyanjui St.	NCC 0164	Mur. St.	1 Av. Eas.	0.00	0.45	0.45	5.50	P	A	U		F	0162
165. Major Muriithi St.	NCC 0165	Juja Rd	End	0.00	1.05	1.05	5.60	U(E)	C	U		B	0163

TABLE 4.3-4 (3) ROAD INVENTORY IN KAMUKUNJI

ZONE: Kamukunji

AREA: Nairobi

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
166. Malewa Road	NCC 0166	1 Av. Eas.	A/F. Fen	0.00	0.83	0.83	4.00	U(E)	A	U		B	0164
167. Marimbi Street	NCC 0167	1 Av. Eas.	Mui. St.	0.00	0.39	0.39	6.70	P	A	U		F	0165
168. Mbale Road	NCC 0168	Bah. Cr.	Hes. Rd	0.00	0.37	0.37	4.40	P	A	U		F	0166
169. Meru Road	NCC 0169	G/W. St.	Digo Rd	0.00	0.55	0.55	7.30	P	A	U	M	F	0167
170. Moyale Road	NCC 0170	Lam. Rd	Bon. St	0.00	0.68	0.68	5.00	P	A	U		F	0168
171. Muinani Street	NCC 0171	G/W. St.	Digo Rd	0.00	0.60	0.60	6.50	P	A	U		F	0169
172. Mumias Road	NCC 0172	O/R. Rd	Rab. Rd	0.00	1.05	1.05	7.00	P	A	U	B	B	0170
173. Munyema Road	NCC 0173	Mer. Rd	Lam. Rd	0.00	0.12	0.12	5.50	P	A	U		B	0171
174. Mutura Road	NCC 0174	1 Av. Eas.	2 Av. Es.	0.00	0.16	0.16	4.00	P	A	U		B	0172
175. Muyuyu Road	NCC 0175	1 Av. Eas.	3 Av. Eas	0.00	0.44	0.44	4.00	P	A	U		B	0173
176. Mvima Nyuki Ave	NCC 0176	Rd. 7	17th St.	0.00	0.14	0.14	5.40	P	A	U		B	0174
"	NCC 0176	Rd. 7	17th St.	0.14	0.26	0.12	5.40	U(E)	A	U		B	0174
177. Mwende Street	NCC 0177	1 Av. Eas.	End	0.00	0.73	0.73	4.00	U(E)	C	U		B	0175
178. Ngiya Road	NCC 0178	1 Av. Eas.	Bon. St	0.00	0.74	0.74	5.00	U(E)	A	U		B	0176
179. Nyasa Road	NCC 0179	W/H. Av.	Jog. Rd	0.00	0.84	0.84	6.90	P	A	U	M	F	0177
180. OI Debbi Road	NCC 0180	Mum. Rd	End	0.00	0.26	0.26	5.00	P	C	U		B	0178
181. OI Diani Road	NCC 0181	O/P. Rd	End	0.00	0.34	0.34	4.80	P	C	U		F	0179
182. OI Leleshwa Rd.	NCC 0182	Mum Rd	Mum. Rd	0.00	0.40	0.40	5.30	P	A	U		B	0180
183. OI Musalala Rd.	NCC 0183	O/P. Rd	End	0.00	0.20	0.20	4.90	P	C	U		F	0181
184. OI Orieni Road	NCC 0184	Mum Rd	End	0.00	0.21	0.21	5.00	P	C	U		F	0182
185. OI Pogoni Rd.	NCC 0185	Mum Rd	Mum. Rd	0.00	0.79	0.79	6.70	P	A	U	M	F	0183
186. Ole Sinoni St.	NCC 0186	Rd. 8	Rd. 7	0.00	0.57	0.57	4.00	U(E)	A	U		B	0184
187. Outer Ring Road	NCC 0187	Jog. Rd	Juja. Rd.	0.00	3.90	3.90	6.90	P	P	U	B	B	0185
188. Pumwani Road	NCC 0188	Digo Rd.	R/Rd. P	0.00	0.71	0.71	8.90	P	A	U	B	B	0186
189. Rabai Road	NCC 0189	Mum Rd	Jog. Rd	0.00	1.15	1.15	7.10	P	D	U	B	F	0187
190. Ramogi Road	NCC 0190	Hes. Rd	Rua. Rd	0.00	0.37	0.37	6.70	P	A	U	M	F	0188
191. Rathon Crescent	NCC 0191	Voi. Rd	Ruv. Cre.	0.00	0.29	0.29	4.40	P	A	U		F	0189
192. Ruaha Road	NCC 0192	Ram. Rd	Jog. Rd	0.00	0.12	0.12	13.70	P	A	U	M	B	0190
193. Ruiru Lane	NCC 0193	Voi. Rd	Kti. Rd	0.00	0.11	0.11	4.40	P	A	U		F	0191
194. Ruvuma Road	NCC 0194	Hes. Rd	Voi Rd	0.00	0.18	0.18	5.30	P	A	U		B	0192
195. Sakwa Road	NCC 0195	Sak. Rd	Lan. Rd	0.00	0.42	0.42	6.40	P	A	U	M	B	0193
196. Sebataiyet Road	NCC 0196	1 Av. Eas.	2 Av. Es.	0.00	0.14	0.14	4.00	P	A	U		B	0194
"	NCC 0196	1 Av. Eas.	2 Av. Es.	0.14	0.40	0.26	4.00	U(E)	A	U		B	0194





**TABLE 4.3-4 (4)**

**GIBB AFRICA**

**AREA:** Nairobi

**ZONE:** Karen

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/impaved)		Road Class (H/P/D/L/A/C)	urban or rural (U/R)	Public Transport Route (B/M/T)	Carriageway condition	Sheet No.
		Start (from)	End (to)	Start (from)	End (to)			(P/U)	(I/A/C)					
211. Acacia Avenue	NCC 0211	Ac. Dr.	End	0.00	0.43	0.43	4.00	U(E)	C	C	U		B	0211
212. Acacia Drive	NCC 0212	Mar. Ln.	End	0.00	1.05	1.05	4.00	U(E)	C	C	U		B	0211
213. Cut Line	NCC 0213	W/S. Rd	W/N. Rd	0.00	0.29	0.29	2.10	U(E)	A	A	U		B	0212
214. Dagoretti Road	NCC 0214	City B	Karen / S	0.00	4.06	4.06	5.80	P	A	A	U	B	F	0213
215. Forest Lane	NCC 0215	Kar. Rd	Mba. RI	0.00	0.88	0.88	3.25	P	A	A	U		F	0214
216. Forest View Rd.	NCC 0216	R/P. Rd	Dag. Rd	0.00	0.21	0.21	4.00	P	A	A	U		F	0215
"	NCC 0216	R/P. Rd	Dag. Rd	0.21	0.94	0.73	4.00	U(E)	A	A	U		B	0215
217. Karen Road (1)	NCC 0217	Mba. R1	Ngo. Rd	0.00	3.03	3.03	5.10	P	L	L	U	B	F	0216
218. Karen Road (2)	NCC 0218	Mba. R1	Ngo. Rd	0.00	1.92	1.92	5.10	P	L	L	U	B	F	0216
219. Kerarapon Road	NCC 0219	Ngo. Rd	MW. J	0.00	0.44	0.44	4.30	P	A	A	U		F	0217
"	NCC 0219	Ngo. Rd	MW. J	0.44	1.61	1.17	4.30	U(E)	A	A	U		F	0217
220. Marula Lane	NCC 0220	Kar. Rd	End	0.00	1.18	1.18	4.00	P	C	C	U		F	0218
"	NCC 0220	Kar. Rd	End	1.18	1.86	0.68	4.00	U(E)	C	C	U		F	0218
221. Mbagathi Ridge	NCC 0221	Mar. Ln.	For. Ln.	0.00	2.39	2.39	4.10	P	L	L	U	M	F	0219
222. Miotoni Lane	NCC 0222	Nan. Rd	Mio. Rd	0.00	0.84	0.84	4.45	P	A	A	U		F	0220
223. Miotoni Rd. (pt.1)	NCC 0223	W/N. Rd	Ngo. Rd	0.00	1.74	1.74	4.55	P	L	L	U	M	F	0221
224. Miotoni Rd. (pt.2)	NCC 0224	W/N. Rd	Ngo. Rd	0.00	1.24	1.24	5.00	P	L	L	U	M	F	0221
225. Miotoni West Rd.	NCC 0225	Mio. Rd	Ngo. Rd	0.00	0.89	0.89	3.75	P	A	A	U		F	0222
226. Mwituu Road	NCC 0226	Kera. Rd	Mwi. Dr	0.00	2.50	2.50	5.00	P	A	A	U	M	F	0223
227. Nandi Road	NCC 0227	Ngo. Rd	Mio. Rd	0.00	1.79	1.79	3.70	P	A	A	U		F	0224
228. Ngong Road	NCC 0228	Len. Sch.	City B	0.00	7.05	7.05	6.30	P	P	P	U	B	F	0225
229. Ololua Ridge	NCC 0229	Ngo. Rd	Mba. RI	0.00	0.56	0.56	4.20	P	A	A	U		F	0226
"	NCC 0229	Ngo. Rd	Mba. RI	0.56	2.78	2.22	4.20	U(G)	A	A	U		B	0226
230. Pepo Lane	NCC 0230	Dag. Rd	End	0.00	1.40	1.40	3.40	U(E)	C	C	U		F	0227
231. Rhino Park Road	NCC 0231	Dag. Rd	End	0.00	2.52	2.52	3.80	P	C	C	U		F	0228
232. The Link Road	NCC 0232	Dag. Rd	Win. RI	0.00	0.56	0.56	5.00	P	D	D	U		F	0229
233. Three Desai Lane	NCC 0233	Dag. Rd	End	0.00	1.80	1.80	3.60	P	C	C	U		F	0230
234. Tree Lane	NCC 0234	Ngo. Rd	End	0.00	1.24	1.24	4.00	U(E)	C	C	U		B	0231
235. Warai North Road	NCC 0235	W/S. Rd	Dag. Rd	0.00	0.86	0.86	3.50	P	A	A	U		F	0232
236. Warai South Road	NCC 0236	Dag. Rd	W/S. Rd	0.00	1.62	1.62	3.40	P	A	A	U		F	0233
237. Westwood Park Rd	NCC 0237	Ngo. Rd	End	0.00	0.58	0.58	4.30	P	C	C	U		F	0234
238. Windy Ridge	NCC 0238	Ngo. Rd	Pepo Ln.	0.00	1.26	1.26	4.40	P	D	D	U		F	0235

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

ROAD INVENTORY

AREA: Nairobi

ZONE: Kibera

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
239. (Frindrt. Est. Rd. F1)	NCC 0239	Rd. F	End	0.00	0.80	0.80	6.50	U(E)	C	U	M	B	236
240. Insurance Coll	NCC 0240	Rd. E	Coll	0.00	0.61	0.61	6.40	U(E)	L	U		B	237
241. Madaraka Pr. Sch.	NCC 0241	O/S. Rd.	Sch.	0.00	0.31	0.31	4.30	P		U		F	238
242. Toi Pr. Sch.	NCC 0242	Mba. Rd.	Mba. Sch.	0.00	0.27	0.27	4.80	P		U		F	239
243. Akiba Est. Rd. D	NCC 0243	Kite. Rd.	End	0.00	0.49	0.49	6.00	P	C	U	M	F	240
244. Akiba Est. Rd. E	NCC 0244	Rd. D	End	0.00	0.12	0.12	5.00	P	C	U		B	241
245. Akiba Est. Rd. F	NCC 0245	Rd. D	End	0.00	0.11	0.11	5.00	P	C	U		F	242
246. Akiba Est. Rd. G	NCC 0246	Rd. D	End	0.00	0.11	0.11	5.00	P	C	U		F	243
247. Akiba Est. Rd. H	NCC 0247	Rd. D	End	0.00	0.09	0.09	5.00	P	C	U		F	244
248. Akiba Est. Rd. Q	NCC 0248	Dot. G	End Crc.	0.00	0.47	0.47	5.30	P	C	U		F	245
249. Amboseli Est. Rd. D	NCC 0249	Dot. G	End	0.00	0.19	0.19	5.30	P	C	U		F	246
250. Civil Servants, Rd. A1	NCC 0250	Kite. Rd.	C/Rd. A3	0.00	0.08	0.08	3.30	P	A	U		F	247
251. Civil Servants, Rd. A2	NCC 0251	LHS	RHS	0.00	0.31	0.31	3.30	P	A	U		F	248
252. Civil Servants, Rd. A3	NCC 0252	LHS	RHS	0.00	0.32	0.32	3.30	P	A	U		F	249
253. Civil Servants, Rd. A4	NCC 0253	C/Rd A3	C/Rd. A5	0.00	0.19	0.19	3.30	P	A	U		F	250
254. Civil Servants, Rd. A5	NCC 0254	C/Rd A3	End	0.00	0.10	0.10	3.30	P	C	U		F	251
255. Customs Est. Rd. 1	NCC 0255	Kite. Rd.	End	0.00	0.19	0.19	7.00	P	C	U	M	F	252
256. Customs Est. Rd. J	NCC 0256	Kite. Rd.	End	0.00	0.25	0.25	6.00	P	C	U	M	F	253
257. Dam Est. Rd. A	NCC 0257	Lan. Rd.	Rd. D	0.00	0.10	0.10	5.30	P		U	M	F	254
258. Dam Est. Rd. B	NCC 0258	Rd. A	Rd. C	0.00	0.18	0.18	5.20	P		U	M	F	255
259. Dam Est. Rd. C	NCC 0259	Rd. B	End	0.00	0.17	0.17	5.20	P	C	U		F	256
260. Dam Est. Rd. D	NCC 0260	Rd. C	Rd. K	0.00	0.45	0.45	5.30	P		U	M	F	257
261. Dam Est. Rd. E	NCC 0261	Rd. D	End	0.00	0.11	0.11	6.00	P	C	U		F	258
262. Dam Est. Rd. F	NCC 0262	Rd. G	Rd. E	0.00	0.14	0.14	4.80	P		U		F	259
263. Dam Est. Rd. G	NCC 0263	Rd. D	End	0.00	0.12	0.12	5.10	P	C	U		F	260
264. Dam Est. Rd. H	NCC 0264	Rd. D	End	0.00	0.13	0.13	5.40	P	C	U		F	261
265. Dam Est. Rd. K	NCC 0265	Lan. Rd.	End (S/C)	0.00	0.17	0.17	7.10	P	C	U		F	262
"	NCC 0265	Lan. Rd.	End	0.17	0.26	0.09	7.10	U(E)	C	U		B	262
266. Highland Est. Rd.	NCC 0266	Dot. G	End Crc.	0.00	0.50	0.50	5.30	P	C	U		F	263
267. Jambo Est. Rd. C	NCC 0267	Rd. B	End	0.00	0.31	0.31	4.80	P	C	U		F	264
268. Jamhuri Est. Rd. B	NCC 0268	St. Rd.	End	0.00	0.20	0.20	5.20	P	C	U	M	F	265
269. Jamhuri Est. Rd. A	NCC 0269	Rd. B	End	0.00	0.13	0.13	4.80	P	C	U		F	266
270. Jamhuri Est. Rd. D	NCC 0270	St. Rd.	End	0.00	0.17	0.17	5.00	P	C	U		F	267

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

AREA: Nairobi

ZONE: Kibera

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
271. Jamhuri Est. Rd. E	NCC 0271	St. Rd.	End	0.00	0.26	0.26	4.80	P	C	U		F	268
272. KMA. Est. Rd. G	NCC 0272	Muh. Av.	Rd. G1	0.00	0.16	0.16	5.30	P		U	M	F	269
273. KMA. Est. Rd. G1	NCC 0273	Rd. G	End	0.00	0.15	0.15	5.30	P	C	U	M	F	270
274. KMA. Est. Rd. G2	NCC 0274	Rd. G1	End	0.00	0.05	0.05	5.30	P	C	U		F	271
275. KMA. Est. Rd. G3	NCC 0275	Rd. G1	End	0.00	0.11	0.11	5.30	P	C	U		F	272
276. KPA Est. Rd. A	NCC 0276	Rd. E	End	0.00	0.29	0.29	5.30	P	C	U		F	273
277. Kibera Std. Rd. C	NCC 0277	Ngo. Rd.	Jam. Est.	0.00	0.14	0.14	4.60	P		U		F	274
278. Kibera Road A	NCC 0278	Kir. Ln.	End	0.00	0.16	0.16	6.00	P	C	U		F	275
279. Ktngela - Langata Rd.	NCC 0279	Kite. Rd.	Lang. Rd.	0.00	0.67	0.67	7.00	P	A	U	M	F	276
280. Langata - Mahiu Rd. X	NCC 0280	Lan. Rd.	M/M. Rd.	0.00	0.59	0.59	5.30	U(E)		U		F	277
281. Longiri - Kangelthe	NCC 0281	Kang. Rd.	End	0.00	0.08	0.08	4.00	P	C	U		F	278
282. Masai Est. Rd. C1	NCC 0282	Kite. Rd.	Rd. C2	0.00	0.08	0.08	5.30	P		U		F	279
283. Masai Est. Rd. C10	NCC 0283	Rd. C3	Rd. C11	0.00	0.12	0.12	4.30	P		U		F	280
284. Masai Est. Rd. C11	NCC 0284	Kite. Rd.	Rd. C12	0.00	0.19	0.19	4.30	P	A	U		F	281
285. Masai Est. Rd. C12	NCC 0285	Kite. Rd.	End	0.00	0.27	0.27	4.30	P	C	U		F	282
286. Masai Est. Rd. C13	NCC 0286	Rd. C12	End	0.00	0.11	0.11	4.30	P	C	U		F	283
287. Masai Est. Rd. C14	NCC 0287	Rd. C12	End	0.00	0.12	0.12	4.30	P	C	U		F	284
288. Masai Est. Rd. C15	NCC 0288	Rd. C10	End	0.00	0.12	0.12	4.30	P	C	U		F	285
289. Masai Est. Rd. C2	NCC 0289	Rd. P1	Rd. P2	0.00	0.04	0.04	5.30	P		U		F	286
290. Masai Est. Rd. C3	NCC 0290	Rd. C1	Rd. C4	0.00	0.39	0.39	5.30	P		U		F	287
291. Masai Est. Rd. C4	NCC 0291	Rd. P1	Rd. P2	0.00	0.14	0.14	4.30	P		U		F	288
292. Masai Est. Rd. C5	NCC 0292	Rd. P1	Rd. P2	0.00	0.06	0.06	4.30	P		U		F	289
293. Masai Est. Rd. C6	NCC 0293	Rd. C5	Rd. C3	0.00	0.06	0.06	4.30	P		U		F	290
294. Masai Est. Rd. C7	NCC 0294	Rd. C3	End	0.00	0.12	0.12	4.30	P	C	U		F	291
295. Masai Est. Rd. C8	NCC 0295	Rd. C3	End	0.00	0.12	0.12	4.30	P	C	U		F	292
296. Masai Est. Rd. C9	NCC 0296	Rd. C3	End	0.00	0.12	0.12	4.30	P	C	U		F	293
297. Matumbato/K-Mbere	NCC 0297	Matu. Rd	K/Bere Rd	0.00	0.15	0.15	3.50	U(E)	A	U		F	294
298. Mbagathi Rd. Kemri	NCC 0298	Mba. Rd.	Kem. X	0.00	0.42	0.42	6.00	P		U	M	F	295
299. Mugoya Est. Rd. R	NCC 0299	Rd. E	Rd. R	0.00	1.05	1.05	5.30	P		U	M	F	296
300. Mugoya Est. Rd. R1	NCC 0300	Rd. R	End	0.00	0.07	0.07	5.30	P	C	U		F	297
301. Mugoya Est. Rd. R2	NCC 0301	Rd. R	End	0.00	0.07	0.07	5.30	P	C	U		F	298
302. Mugoya Est. Rd. R3	NCC 0302	Rd. R4	Rd. R	0.00	0.05	0.05	5.30	P		U		F	299
303. Mugoya Est. Rd. R4	NCC 0303	Rd. R	End	0.00	0.24	0.24	5.30	P	C	U		F	300

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

AREA: Nairobi

ZONE: Kibera

AREA: Nairobi

ROAD INVENTORY

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
304. Mugoya Rd. X (pt.1)	NCC 0304	O/S. Av.	Muh. Av.	0.00	0.54	0.54	5.30	P		U	M	F	301
305. Mugoya Rd. X (pt.2)	NCC 0305	Muh. Av.	Muh. Av.	0.00	0.60	0.60	5.30	P		U	M	F	302
306. Muhoho - Mbsa. Rd. E	NCC 0306	Muh. Av.	Msa. Rd.	0.00	1.18	1.18	5.30	P	D	U	M	F	303
307. Muthongo Est. Rd. B	NCC 0307	Dot. G	End Crc.	0.00	0.53	0.53	5.30	P	C	U		F	304
308. NCC West, Rd. X	NCC 0308	Mus. Rd.	Mut. Rd.	0.00	0.41	0.41	5.30	P	A	U		F	305
309. New Est. Rd. C	NCC 0309	Kib. Dr.	End	0.00	0.58	0.58	5.50	P	C	U		F	306
310. New Est. Rd. D	NCC 0310	Rd. C	Rd. E	0.00	0.22	0.22	5.40	P		U		F	307
311. New Est. Rd. E	NCC 0311	Rd. C	End	0.00	0.15	0.15	5.50	P	C	U		F	308
312. New Est. Rd. F	NCC 0312	Kino Rd.	End	0.00	0.13	0.13	2.90	P	C	U		F	309
313. Ngumo Est. Rd. A	NCC 0313	Mba. Rd.	End	0.00	0.15	0.15	4.90	P	C	U		F	310
314. Ngumo Est. Rd. B	NCC 0314	Rd. A	Rd. C	0.00	0.08	0.08	5.60	P	A	U		F	311
315. Ngumo Est. Rd. C	NCC 0315	Rd. B	End	0.00	0.18	0.18	5.40	P	C	U		F	311
316. Ngumo Est. Rd. D	NCC 0316	Mba. Rd.	End	0.00	0.22	0.22	5.50	P	C	U		F	312
317. Ngumo Est. Rd. E	NCC 0317	Rd. D	Rd. F	0.00	0.09	0.09	5.50	P	A	U		F	313
318. Ngumo Est. Rd. F	NCC 0318	Rd. E	End	0.00	0.17	0.17	5.50	P	C	U		F	314
319. Ngumo Est. Rd. G	NCC 0319	Mba. Rd.	End	0.00	0.24	0.24	5.40	P	C	U		F	315
320. Ngumo Est. Rd. H	NCC 0320	Rd. G	End	0.00	0.32	0.32	6.00	P	A	U		F	316
321. Ngumo Est. Rd. I	NCC 0321	Mba. Rd.	Rd. H	0.00	0.37	0.37	6.00	P	A	U		F	317
322. Ngumo Est. Rd. J	NCC 0322	Mba. Rd.	Rd. L	0.00	0.11	0.11	6.00	P	A	U		F	318
323. Ngumo Est. Rd. K	NCC 0323	Rd. L	L/R	0.00	0.18	0.18	5.00	P	A	U		F	319
324. Ngumo Est. Rd. L	NCC 0324	Rd. K	Rd. M	0.00	0.13	0.13	6.00	P	A	U		F	320
325. Ngumo Est. Rd. M	NCC 0325	Rd. L	L/R	0.00	0.14	0.14	6.00	P	A	U		F	321
326. Ngumo Est. Rd. N	NCC 0326	Rd. L	RD. Y	0.00	0.07	0.07	5.00	P	A	U		F	322
327. Ngumo Est. Rd. P	NCC 0327	Mba. Rd.	Rd. V	0.00	0.34	0.34	6.00	P	A	U		F	323
328. Ngumo Est. Rd. Q	NCC 0328	Rd. P	End	0.00	0.19	0.19	6.00	P	C	U		F	324
329. Ngumo Est. Rd. R	NCC 0329	Rd. P	End	0.00	0.11	0.11	5.00	P	C	U		F	325
330. Ngumo Est. Rd. S	NCC 0330	Rd. P	End	0.00	0.15	0.15	5.00	P	C	U		F	326
331. Ngumo Est. Rd. T	NCC 0331	Rd. P	End	0.00	0.08	0.08	5.00	P	C	U		F	327
332. Ngumo Est. Rd. U	NCC 0332	Mba. Rd.	Rd. V	0.00	0.10	0.10	6.00	P	A	U		F	328
333. Ngumo Est. Rd. V	NCC 0333	Rd. P/L	L/R	0.00	0.40	0.40	5.00	P		U		F	329
334. Ngumo Est. Rd. W	NCC 0334	Bag. Rd.	End	0.00	0.44	0.44	5.00	P	A	U		F	330
335. Ngumo Est. Rd. Y	NCC 0335	Rd. N	End	0.00	0.10	0.10	6.00	P	C	U		F	331
336. Rubia Est. Rd. D1	NCC 0336	Kite. Rd.	Rd. D2	0.00	0.24	0.24	6.40	P	A	U	M	F	332

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

AREA: Nairobi

ZONE: Kibera

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
337. Rubia Est. Rd. D2	NCC 0337	K. Rd. D3	End	0.00	0.27	0.27	5.30	P	C	U	M	F	333
338. Rubia Est. Rd. D5	NCC 0338	K. Rd. D3	End	0.00	0.09	0.09	5.30	P	C	U		F	334
339. Rubia Est. Rd. D6	NCC 0339	G/O. Rd	End	0.00	0.07	0.07	5.30	P	C	U		F	335
340. Rubia Est. Rd. D7	NCC 0340	G/O. Rd	End	0.00	0.09	0.09	5.30	P	C	U		F	336
341. Ruby Est. Rd. A1	NCC 0341	Rd. A	Rd. B	0.00	0.12	0.12	5.30	P	C	U		F	337
342. Ruby Est. Rd. A2	NCC 0342	Rd. B	Rd. A	0.00	0.12	0.12	5.30	P	C	U		F	338
343. Ruby Est. Rd. A3	NCC 0343	Rd. B	Rd. A	0.00	0.12	0.12	5.30	P	C	U		F	339
344. Ruby Est. Rd. B	NCC 0344	Muh. Av.	End	0.00	0.46	0.46	5.30	P	C	U	M	F	340
345. Ruby Est. Rd. C	NCC 0345	Muh. Av.	End	0.00	0.22	0.22	5.30	P	C	U		F	341
346. Ruby Est. Rd. C1	NCC 0346	Rd. C	End	0.00	0.08	0.08	5.30	P	C	U		F	342
347. Ruby Est. Rd. C2	NCC 0347	Rd. C	End	0.00	0.08	0.08	5.30	P	C	U		F	343
348. Ruby Est. Rd. C3	NCC 0348	Rd. C1	End	0.00	0.08	0.08	5.30	P	C	U		F	344
349. Ruby Est. Rd. A (1)	NCC 0349	Muh. Av.	End	0.00	0.24	0.24	5.30	P	C	U	M	F	345
350. Ruby Est. Rd. A (2)	NCC 0350	Muh. Av.	End	0.00	0.22	0.22	5.30	U(E)	C	U	M	F	346
351. S. C. Sch. Centre	NCC 0351	Muh. Av.	Muh. Av.	0.00	0.22	0.22	5.30	P	C	U		F	347
352. S. Lands Est. Rd. B1	NCC 0352	Kit. Rd	S. Rd. B2	0.00	0.25	0.25	5.30	P	A	U	M	F	348
353. S. Lands Est. Rd. B2	NCC 0353	Rd. B10	Rd. B3	0.00	0.71	0.71	5.30	P	A	U	M	F	349
354. S. Lands Est. Rd. B3	NCC 0354	Rd. B2	End	0.00	0.06	0.06	5.30	P	C	U		F	350
355. S. Lands Est. Rd. B4	NCC 0355	Rd. B2	End	0.00	0.08	0.08	5.30	P	C	U		F	351
356. S. Lands Est. Rd. B5	NCC 0356	Rd. B2	Rd. B6	0.00	0.08	0.08	5.30	P	A	U		F	352
357. S. Lands Est. Rd. B6	NCC 0357	Rd. X1	Rd. X2	0.00	0.15	0.15	5.30	P	A	U		F	353
358. S. Lands Est. Rd. B7	NCC 0358	Rd. B2	End	0.00	0.11	0.11	5.30	P	C	U		F	354
359. S. Lands Est. Rd. B8	NCC 0359	Rd. B2	End	0.00	0.10	0.10	5.30	P	C	U		F	355
360. S. Lands Est. Rd. B9	NCC 0360	Rd. B8	Rd. B1	0.00	0.10	0.10	5.30	P	A	U		F	356
361. S. Lands Est. Rd. B10	NCC 0361	Rd. B2	Rd. B11	0.00	0.21	0.21	5.30	P	A	U	M	F	357
362. S. Lands Est. Rd. B11	NCC 0362	Rd. X1	Rd. X2	0.00	0.06	0.06	5.30	P	A	U		F	358
363. S. Lands Est. Rd. B12	NCC 0363	Rd. B1	Rd. B10	0.00	0.08	0.08	5.30	P	A	U	M	F	359
364. Savanna Est. Rd. D1	NCC 0364	Rd. D	End	0.00	0.23	0.23	5.30	P	C	U	M	F	360
365. Savanna Est. Rd. D2	NCC 0365	Rd. D1	End	0.00	0.14	0.14	5.30	P	C	U		F	361
366. Savanna Est. Rd. D3	NCC 0366	Rd. D2	End	0.00	0.14	0.14	5.30	P	C	U		F	362
367. Savanna Est. Rd. D(1)	NCC 0367	Muh. Av.	Rd. D1	0.00	0.08	0.08	5.30	P	L	U		F	363
368. Savanna Est. Rd. D(2)	NCC 0368	Muh. Av.	Rd. D1	0.00	0.13	0.13	5.30	U(E)	L	U		F	364
369. South 'C' Rd. B	NCC 0369	Muf. Av.	End	0.00	0.27	0.27	5.30	P	C	U		F	365

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

ROAD INVENTORY AREA: Nairobi ZONE: Kibera GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
370. South 'C' Rd. C	NCC 0370	Rd. D	Rd. B	0.00	0.10	0.10	5.30	P	A	U		F	367
371. South 'C' Rd. C1	NCC 0371	Rd. C	End	0.00	0.09	0.09	5.30	P	C	U		F	368
372. South 'C' Rd. D	NCC 0372	Muh. Av.	End	0.00	0.27	0.27	5.30	P	C	U		F	369
373. South 'C' Rd. D1	NCC 0373	Rd. D	End	0.00	0.14	0.14	5.30	P	C	U		F	370
374. South 'C' Rd. E	NCC 0374	End	End	0.00	0.25	0.25	4.30	P	C	U		F	371
375. South 'C' Rd. F	NCC 0375	End	End	0.00	0.22	0.22	5.30	P	C	U		F	372
376. South 'C' Rd. G	NCC 0376	Rd. E	Rd. F	0.00	0.05	0.05	4.30	P		U		F	373
377. South 'C' Rd. H	NCC 0377	Rd. E	Rd. F	0.00	0.05	0.05	4.30	P		U		F	374A
378. South 'C' Rd. I	NCC 0378	Rd. Y	End	0.00	0.27	0.27	5.30	P	C	U		F	374B
379. South 'C' Rd. J	NCC 0379	Rd. E	End	0.00	0.22	0.22	5.30	P	C	U		F	375
380. South 'C' Rd. K	NCC 0380	Rd. J	End	0.00	0.20	0.20	5.30	P	C	U		F	376
381. South 'C' Rd. M	NCC 0381	Rd. J	End	0.00	0.20	0.20	5.30	P	C	U		F	377
382. South 'C' Rd. N1	NCC 0382	Rd. J	End	0.00	0.11	0.11	5.30	P	C	U		F	378
383. South 'C' Rd. N2	NCC 0383	Rd. J	End	0.00	0.11	0.11	5.30	P	C	U		F	379
384. South 'C' Rd. O	NCC 0384	Rd. X1	End	0.00	0.13	0.13	5.30	P	C	U		F	380
385. South 'C' Rd. P	NCC 0385	O/S. Av.	Rd. T1	0.00	0.66	0.66	6.40	P	A	U		F	381
386. South 'C' Rd. Q	NCC 0386	Rd. P	P. Circ.	0.00	0.37	0.37	5.30	P	A	U	M	F	382
387. South 'C' Rd. R	NCC 0387	Rd. P	End	0.00	0.22	0.22	5.30	P	C	U		F	383
388. South 'C' Rd. S	NCC 0388	Rd. P	O/S. Av.	0.00	0.15	0.15	5.30	P	A	U		F	384
389. South 'C' Rd. T	NCC 0389	End	End	0.00	0.37	0.37	4.30	P	C	U		F	385
390. South 'C' Rd. T2	NCC 0390	Kig. Av.	Msa. Rd.	0.00	0.15	0.15	5.30	P		U	M	F	386
391. South 'C' Rd. T3	NCC 0391	Rd. Y	End	0.00	0.14	0.14	5.30	P	C	U		F	387
392. South 'C' Rd. T4	NCC 0392	Rd. T6	End	0.00	0.06	0.06	5.30	P	C	U		F	388
393. South 'C' Rd. T5	NCC 0393	Rd. T7	Rd. T6	0.00	0.06	0.06	5.30	P		U		F	389
394. South 'C' Rd. T6	NCC 0394	Rd. T5	End	0.00	0.25	0.25	5.30	P	C	U		F	390
395. South 'C' Rd. T7	NCC 0395	Muh. Av.	End	0.00	0.25	0.25	5.30	P	C	U		F	391
396. South 'C' Rd. U	NCC 0396	Rd. X1	End (c)	0.00	0.25	0.25	5.30	P	C	U	M	F	392
397. South 'C' Rd. V	NCC 0397	Rd. U	Rd. W	0.00	0.21	0.21	5.30	P		U	M	F	393
398. South 'C' Rd. W	NCC 0398	Rd. T3	End	0.00	0.27	0.27	5.30	P	C	U	M	F	394
399. South 'C' Rd. X1	NCC 0399	Rd. P	End	0.00	0.15	0.15	5.30	P	C	U		F	395
400. South 'C' Rd. X2	NCC 0400	Mihu. Av.	Mihu. Av.	0.00	0.09	0.09	4.30	P		U		F	396
401. South 'C' Rd. Y	NCC 0401	Rd. U	Rd. X1	0.00	0.24	0.24	5.30	P		U		F	397
402. South 'C' Rd. Z	NCC 0402	Muf. Av.	Rd. X1	0.00	0.38	0.38	6.40	P	A	U	M	F	398

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

ROAD INVENTORY AREA: Nairobi ZONE: Kibera GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
403. Southend Est. Rd. P1	NCC 0403	Rd. E	End	0.00	0.12	0.12	5.30	P	C	U		F	399
404. Southend Est. Rd. P2	NCC 0404	Rd. P1	End	0.00	0.05	0.05	5.30	P	C	U		F	400
405. Sunview Est. Rd. 1	NCC 0405	Bag. Rd.	Rd. 2	0.00	0.28	0.28	5.00	P		U		F	401
406. Sunview Est. Rd. 2	NCC 0406	Rd. 1	Rd. 1	0.00	0.46	0.46	6.00	P		U		F	402
407. Fr. Matumbato Rd. B	NCC 0407	M/K. Rd.	End	0.00	0.11	0.11	6.40	U(G)	C	U	M	F	403
"	NCC 0407	M/K. Rd.	End	0.11	0.22	0.11	6.40	U(E)	C	U		F	403
408. Fr. Moboko Rd, Rd. A	NCC 0408	Mob. Rd.	Kite. Rd.	0.00	0.44	0.44	5.00	P	A	U		F	404
409. Fr. Mucai Dr. Rd. 1	NCC 0409	Mug. Dr.	Golf C	0.00	0.17	0.17	4.00	P		U		F	405
410. Off Muhoho Av. Rd. Y	NCC 0410	Muh. Av.	Rd. X	0.00	0.49	0.49	4.30	P		U		F	406
411. 1st Crescent	NCC 0411	Mus. Rd.	Mus. Rd.	0.00	0.42	0.42	5.30	P	A	U		F	407
412. Amiani Close	NCC 0412	Am. Crisc.	End	0.00	0.09	0.09	5.00	P	C	U		F	408
413. Amiani Crescent	NCC 0413	Am. Rd.	Am Rd.	0.00	0.46	0.46	4.70	P		U		F	409
414. Amiani Road	NCC 0414	Sas. Rd.	Chw. Rd.	0.00	0.55	0.55	6.00	P	A	U		F	410
415. Bagamoyo Road	NCC 0415	Ngg. Rd.	Mba. Rd.	0.00	0.21	0.21	4.00	P	A	U		F	411
416. Birongo Road	NCC 0416	Rd. B	End	0.00	0.36	0.36	5.00	P	C	U	B	F	412
417. Birongo Square	NCC 0417	Mut. Rd.	NCC W. Sh.	0.00	0.38	0.38	5.30	P		U		F	413
418. Bukani Road	NCC 0418	Mus. Rd.	Muth. Av.	0.00	0.21	0.21	5.30	P	D	U		F	414
419. Bunyala Road	NCC 0419	L/Hill Rd.	Uhu. H/W	0.00	0.36	0.36	5.30	P	D	U		F	415
420. Chweya Road	NCC 0420	Sas. Rd.	End	0.00	0.43	0.43	6.80	P	C	U	M	F	416
421. Chyulu Road	NCC 0421	Mar. Rd	Ngg. Rd.	0.00	0.40	0.40	3.30	P	A	U		F	417
422. Elgon Road	NCC 0422	Hos. Rd.	U/Hill Rd.	0.00	0.92	0.92	5.30	P	L	U		F	418
423. Gandhi Avenue	NCC 0423	Lan. Rd.	Kisa. Rd.	0.00	0.66	0.66	6.40	P	D	U		F	419
424. Gathigu Close	NCC 0424	Kina. Rd.	End	0.00	0.06	0.06	4.70	P	C	U	M	F	420
425. Geta Close	NCC 0425	Kodi. Rd.	End	0.00	0.13	0.13	5.30	P	C	U		F	421
426. Got Obiny Road	NCC 0426	R. E. Rd1	End	0.00	0.16	0.16	5.30	P	C	U		F	422
427. Gura Grove	NCC 0427	Long. Rd.	Long. Rd.	0.00	0.33	0.33	3.70	P	A	U		F	423
428. Hodari Avenue (pt.1)	NCC 0428	Muh. Av.	Bligs.	0.00	0.10	0.10	4.30	P	C	U		F	424
429. Hodari Road (pt.2)	NCC 0429	O/S. Av.	Bligs.	0.00	0.12	0.12	4.30	P	C	U		F	425
430. Hospital Road	NCC 0430	Ngg. Rd.	Mar. Rd.	0.00	1.56	1.56	5.30	P	A	U		F	426
431. J. Kangehe Rd. (pt.1)	NCC 0431	Kab. Rd.	Ngg. Rd.	0.00	0.26	0.26	3.80	U(E)	A	U		F	427
432. J. Kangehe Rd. (pt.2)	NCC0432	Kab. Rd.	Ngg. Rd.	0.00	1.62	1.62	5.60	P	A	U		F	428
433. Jaa Mono Close	NCC 0433	Ja/Mo. Rd.	End	0.00	0.12	0.12	4.80	P	C	U		F	429
434. Jaa Mono Road	NCC 0434	Kang. Rd.	End	0.00	0.30	0.30	5.40	P	C	U		F	430

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

ROAD INVENTORY AREA: Nairobi ZONE: Kibera GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
435. Jamhuri Crescent	NCC 0435	Kaba. Rd.	Kaba Rd.	0.00	0.38	0.38	5.00	P	L	U		F	431
436. Jamhuri Road	NCC 0436	Ngo. Rd.	Kibe. Rd.	0.00	1.60	1.60	6.30	P	A	U		F	432
437. Kabiyeet Road	NCC 0437	Muh. Av.	Tho. Rd.	0.00	0.20	0.20	5.30	P		U		F	433
438. Kaisungur Road	NCC 0438	Muh. Av.	O/S. Av.	0.00	0.26	0.26	4.30	P		U		F	434
439. Kalasa Road	NCC 0439	Mab. Rd.	Mab. Crs.	0.00	0.11	0.11	5.00	P		U		F	435
440. Kambere Road	NCC 0440	L/H. Rd.	Rail/L	0.00	0.76	0.76	5.30	P	A	U		F	436
441. Kamurana Close (D4)	NCC 0441	End	End	0.00	0.06	0.06	5.30	P	C	U		F	437
442. Kamurana Road (D3)	NCC 0442	Kamu. Cl.	R. E. Rd. 2	0.00	0.52	0.52	5.30	P		U		F	438
443. Kanga Road	NCC 0443	Mak. Rd.	Sasu Rd.	0.00	0.37	0.37	6.10	P		U		F	439
444. Kangeethe Green	NCC 0444	Lang. Rd.	Lang. Rd.	0.00	0.29	0.29	4.00	P	A	U		F	440
445. Kanjaro Road	NCC 0445	Mbar. Rd	End	0.00	0.09	0.09	5.00	P	C	U		F	441
446. Kabarnet Gardens	NCC 0446	Kab. Rd.	H/S. Home	0.00	0.27	0.27	5.40	P	A	U		F	442
447. Kabarnet Lane	NCC 0447	Kab. Rd.	End	0.00	0.24	0.24	3.20	P	C	U		F	443
448. Kabarnet Road	NCC 0448	J/K. Rd.	Kib. Rd.	0.00	0.80	0.80	5.00	P	A	U	M	F	444
449. Karuri Gakure Road	NCC 0449	O/Sa. Rd.	O/Sa. Rd.	0.00	0.70	0.70	5.30	P	A	U		F	445
450. Kenya Road	NCC 0450	Kili Rd.	Hosp. Rd.	0.00	0.40	0.40	3.30	P	L	U		F	446
451. Kibera Close	NCC 0451	Kab. Rd.	End	0.00	0.21	0.21	5.00	P	C	U		F	447
452. Kibera Drive	NCC 0452	Jam. Rd.	J/K. Rd.	0.00	4.07	4.07	5.40	P	A	U	M	F	448
453. Kibera Road	NCC 0453	Kab. Rd.	Ngo. Rd.	0.00	0.49	0.49	4.00	U(E)	A	U		B	449
454. Kibera Stn. Road	NCC 0454	Sta. Rd.	Kib. Stn.	0.00	0.38	0.38	5.00	P	A	U	M	F	450
455. Kibera Stn. Road	NCC 0455	Ngo. Rd.	Jam. Est.	0.00	0.80	0.80	7.10	P	D	U	M	F	451
456. Kibuye Road	NCC 0456	Ngob. Rd.	End	0.00	0.07	0.07	5.00	P	C	U		F	452
457. Kifaru Crescent	NCC 0457	Mus. Rd.	Mus. Rd.	0.00	0.42	0.42	5.30	P	A	U		F	453A
458. Kilimanjaro Avenue	NCC 0458	Elg. Rd.	Mara Rd.	0.00	0.50	0.50	5.30	P	L	U		F	453B
459. Kinangop Road	NCC 0459	Sun Rd.	Muv. Gr.	0.00	0.78	0.78	5.00	P	A	U		F	454
460. Kinari Road	NCC 0460	B/R. Rd.	Rd. B	0.00	0.28	0.28	5.00	P		U		F	455
461. Kinoo Road (1)	NCC 0461	J/K. Rd.	End	0.00	0.10	0.10	6.70	P	C	U		F	456
462. Kinoo Road (2)	NCC 0462	J/K. Rd.	End	0.00	0.30	0.30	6.70	U(E)	C	U		F	457
463. Kirichwa Lane	NCC 0463	Suna. Rd.	End	0.00	0.12	0.12	6.10	P	C	U		F	458
464. Kiringa Road	NCC 0464	B/R. Rd.	End	0.00	0.11	0.11	4.00	P	C	U		F	459
465. Kisauni Road	NCC 0465	Gan. Rd.	Gan. Rd.	0.00	0.84	0.84	5.30	P	D	U	M	F	460
466. Kitengela Rd. (pt.1)	NCC 0466	Kite. Rd. B	S/L. Rd. B1	0.00	1.06	1.06	7.00	P	L	U	B	F	461
467. Kitengela Rd. (pt.2)	NCC 0467	K/K. Rd.	S/L. Est.	0.00	0.53	0.53	6.00	P	L	U	B	F	462



TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

AREA: Nairobi

ZONE: Kibera

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
468. Kodi Road	NCC 0468	Gan. Av.	Gan. Av.	0.00	0.61	0.61	5.30	P	A	U		F	463
469. Kolobot Crescent	NCC 0469	Kolo. Rd.	Kolo. Rd.	0.00	0.31	0.31	4.80	P	A	U		F	464
470. Kolobot Road	NCC 0470	Kolo. Rd.	End	0.00	0.84	0.84	5.20	P	C	U		F	465
471. Kungu Karumba Rd.	NCC 0471	Lan. Rd.	Sas. Rd.	0.00	0.80	0.80	6.70	P	A	U	M	F	466
472. Langata Rd. (pt.1)	NCC 0472	Karen	Lan. Bar	0.00	2.69	2.69	6.50	P	D	U	B	F	467
473. Langata Rd. (pt.2)	NCC 0473	Msa. Rd.	Lan. Rd.	0.00	3.31	3.31	7.50	P	D	U	B	F	468
474. Lindi Close	NCC 0474	Lin. Lane	End	0.00	0.08	0.08	4.60	P	C	U		F	469
475. Lindi Lane	NCC 0475	Kan. Rd.	End	0.00	0.12	0.12	5.60	P	C	U		F	470
476. Longinye Road	NCC 0476	Mba. Rd.	Golf / C	0.00	0.08	0.08	4.00	P	A	U		F	471
477. Longiri Close	NCC 0477	Kan. Gr.	End	0.00	0.12	0.12	4.00	P	C	U		F	472
478. Longiri Road	NCC 0478	Suna Rd.	M/K. Rd.	0.00	1.17	1.17	4.20	P	A	U		F	473
479. Longonot Road	NCC 0479	Ken. Rd.	Kili. Rd.	0.00	0.32	0.32	5.30	P	L	U		F	474
480. Lower Hill Road	NCC 0480	H/S. Av.	Kamb. Rd.	0.00	1.37	1.37	4.30	P	C	U		F	475
481. Maboko Close	NCC 0481	Mab. Rd.	End	0.00	0.10	0.10	5.00	P	C	U		F	476
482. Maboko Crescent	NCC 0482	Mab. Rd.	Mab. Rd.	0.00	0.53	0.53	5.00	P	A	U		F	477
483. Maboko Road	NCC 0483	Kite. Rd.	Mab. Crc.	0.00	0.79	0.79	5.00	P	A	U		F	478
484. Mai Mahiu Road	NCC 0484	Muh. Av.	End	0.00	0.39	0.39	5.30	P	C	U		F	479
485. Makarati Road	NCC 0485	P/M. Crc.	P/H. Crc.	0.00	0.10	0.10	4.30	P		U		F	480
486. Makina Crescent	NCC 0486	Mak. Rd.	Mak. Rd.	0.00	0.17	0.17	4.90	P		U		F	480
487. Makina Road	NCC 0487	K/Sa. Junc.	End	0.00	0.13	0.13	5.50	P	C	U		F	482
488. Malibet Road	NCC 0488	Mab. Crc.	Mab. Rd.	0.00	0.15	0.15	6.00	P		U		F	483
489. Mara Road (1)	NCC 0489	U/H. Rd.	Hos. Rd.	0.00	0.50	0.50	4.30	P	L	U		F	484
490. Mara Road (2)	NCC 0490	U/H. Rd.	Hos. Rd.	0.00	0.50	0.50	4.30	P	L	U		F	485
491. Masaba Road	NCC 0491	Bun. Rd.	Kis. R/L	0.00	0.92	0.92	4.30	P	A	U		F	486
"	NCC 0491	Bun. Rd.	Kis. R/L	0.92	1.03	1.11	4.30	U(E)	A	U		B	486
492. Matumbato Close	NCC 0492	Mat. Rd.	End	0.00	0.20	0.20	3.30	P	C	U		F	487
493. Matumbato Road	NCC 0493	L/H. Rd.	Elg. Rd.	0.00	0.94	0.94	5.80	P	L	U		F	488
494. Mbagathi Road	NCC 0494	Mbag. W	Baga. Rd.	0.00	1.44	1.44	7.00	P	A	U	B	F	489
495. Mbagathi Way	NCC 0495	LAN. Rd.	Ngo. Rd.	0.00	2.95	2.95	6.40	P	D	U		F	490
496. Mbaruk Road	NCC 0496	Muc. Dr.	Baga. Rd.	0.00	0.75	0.75	5.00	P	A	U		F	491
497. Mbuni Close	NCC 0497	Kang. Rd.	End	0.00	0.11	0.11	4.70	P	C	U		F	492
498. Mellili Road	NCC 0498	Kig. Av.	Msa. Rd.	0.00	0.51	0.51	7.40	P		U		F	493
499. Mihuti Avenue	NCC 0499	Muh. Av.	O/S. Av.	0.00	0.30	0.30	6.40	P	A	U		F	494

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

AREA: Nairobi

ZONE: Kibera

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
500. Mihuti Close	NCC 0500	Mih. Av.	Mih. Av.	0.00	0.10	0.10	4.30	P	C	U		F	495
501. Mihuti Crescent	NCC 0501	Mih. Av.	Mih. Av.	0.00	0.09	0.09	4.30	P	A	U		F	496
502. Mitelo Road	NCC 0502	Mih. Av.	Mih. Av.	0.00	0.27	0.27	4.30	P	A	U		F	497
503. Morara Lane	NCC 0503	Kol. Rd.	End	0.00	0.09	0.09	4.60	P	C	U		F	498
504. Mosiro Road	NCC 0504	Mbar. Rd.	End	0.00	0.09	0.09	5.00	P	C	U		F	499
505. Msufi Road	NCC 0505	Gan. Av.	End	0.00	0.40	0.40	6.40	U(E)	C	U	M	F	500
506. Mfongwe Road	NCC 0506	Bag. Rd.	Bag. Rd.	0.00	0.45	0.45	7.00	P	A	U		F	501
507. Mucai Drive	NCC 0507	Ng. Rd.	Mbar. Rd.	0.00	0.53	0.53	5.00	P	A	U		F	502
508. Mucai Road	NCC 0508	Muc. Dr.	Mbar. Rd.	0.00	0.28	0.28	5.00	P	P	U		F	503
509. Mufulu Ave.	NCC 0509	O/S. Av.	Club	0.00	0.27	0.27	6.40	P	L	U	M	F	504
510. Mugo Kiburu Road	NCC 0510	J/K. Rd.	Ng. Rd.	0.00	0.40	0.40	7.00	P	A	U	B	F	505
511. Muhohe Ave. (pt.1)	NCC 0511	Gan. Av.	Pt. 2	0.00	0.48	0.48	7.40	P	A	U	M	F	506
512. Muhohe Ave. (pt.3)	NCC 0512	Muh. Av.	End	0.00	0.40	0.40	6.40	U(G)	C	U	M	F	507
"	NCC 0512	Muh. Av.	End	0.40	0.70	0.30	6.40	U(E)	C	U	M	F	507
513. Muhohe Road (pt.2)	NCC 0513	Muh. Av.	End	0.00	1.83	1.83	6.40	P	C	U	M	F	508
514. Muhaiti Ave. (1)	NCC 0514	Lan. Rd.	Sum. Rd.	0.00	0.27	0.27	5.30	P	D	U	M	F	509
515. Muhaiti Ave. (2)	NCC 0515	Lan. Rd.	Sum. Rd.	0.00	0.24	0.24	5.30	P	D	U	M	F	510
516. Mutomo Road	NCC 0516	Mbar. Rd.	End	0.00	0.09	0.09	5.00	P	C	U		F	511
517. Muvaa Grove	NCC 0517	Kin. Rd.	Muv. Lan.	0.00	0.32	0.32	4.00	P	P	U		F	512
518. Muvaa Lane	NCC 0518	Kin. Rd.	Muv. Gr.	0.00	0.13	0.13	3.80	P	P	U		F	513
519. Mwachui Road	NCC 0519	Bir. Rd.	End	0.00	0.26	0.26	5.00	P	P	U		F	514
520. Mwenesi Crescent	NCC 0520	Matu. Rd.	Matu. Rd.	0.00	0.27	0.27	5.30	P	P	U		F	515
521. Mwenesi Gardens Rd.	NCC 0521	Matu. Rd.	End	0.00	0.45	0.45	5.30	P	C	U		F	516
522. Ndekwa Road (pt.1)	NCC 0522	Muh. Av.	Bldgs.	0.00	0.10	0.10	4.30	P	A	U		F	517
523. Ndekwa Road (pt.2)	NCC 0523	O/S. Av.	Bldgs.	0.00	0.11	0.11	4.30	P	A	U		F	518
524. Ndeani Lane	NCC 0524	Ng. Rd.	End	0.00	0.16	0.16	4.00	U(E)	C	U		F	519
525. Ndovu Close	NCC 0525	Kang. Rd.	End	0.00	0.10	0.10	4.60	P	C	U		F	520
526. Ngobit Road	NCC 0526	Baga. Rd.	End	0.00	0.29	0.29	5.00	P	C	U		F	521
527. Ngong Lane	NCC 0527	Ng. Rd.	Langi. Rd.	0.00	0.15	0.15	4.00	U(E)	A	U		F	522
528. Niamey Road	NCC 0528	Mus. Rd.	Muth. Rd.	0.00	0.23	0.23	5.30	P	A	U	M	F	523
529. Ole Sangale Road	NCC 0529	Lan. Rd.	End	0.00	0.96	0.96	7.40	P	C	U		F	524
530. Ole Shapara Avenue	NCC 0530	Muh. Av.	Muh. Av.	0.00	1.08	1.08	5.30	P	A	U	M	F	525
531. Oledeani Crescent	NCC 0531	Mat. Rd.	Mat. Rd.	0.00	0.37	0.37	6.40	P	A	U		F	526

TABLE 4.3-4 (5) ROAD INVENTORY IN KIBERA

ROAD INVENTORY AREA: Nairobi ZONE: Kibera GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
532. Oluvimu Road	NCC 0532	Muh. Av.	Sungu Rd	0.00	0.16	0.16	4.30	P	A	U		F	527
533. Paa Crescent	NCC 0533	Mus. Rd.	Mus. Rd.	0.00	0.42	0.42	5.30	P	A	U		F	528
534. Padhola Close	NCC 0534	Bir. Rd.	End	0.00	0.11	0.11	4.00	P	C	U		F	529
535. Pika Avenue	NCC 0535	J/S. Av.	End	0.00	0.17	0.17	4.00	P	C	U		F	530
536. Podo Road	NCC 0536	V/T. Cl.	Kina. Rd.	0.00	0.11	0.11	5.00	P	C	U		F	531
537. Pojo Close	NCC 0537	Kam. Rd.D3	End	0.00	0.08	0.08	5.30	P	C	U		F	532
538. Pojo Road	NCC 0538	R/E. Rd.D1	Kam. Rd.D3	0.00	0.12	0.12	5.30	P	C	U		F	533
539. Punda Mlia Crescent	NCC 0539	Muh. Av.	Muh. Av.	0.00	0.30	0.30	4.30	P	A	U		F	534
540. Ragati Road	NCC 0540	Mara. Rd.	H/S. Av.	0.00	0.35	0.35	3.30	P	A	U		F	535
541. Rd. A	NCC 0541	Chw. Rd.	Kolo. Rd.	0.00	0.07	0.07	5.50	P	A	U		F	536
542. Rd. X	NCC 0542	Kan. Rd.	End	0.00	0.09	0.09	4.60	P	C	U		F	537
543. Rumbi Close	NCC 0543	Ami. Cl.	End	0.00	0.15	0.15	4.10	P	C	U		F	538
544. Rumi Road	NCC 0544	O/S. Av.	O/S. Av.	0.00	0.28	0.28	4.30	P	A	U		F	539
545. Sasumua Crescent	NCC 0545	Sas. Rd.	Sas. Rd.	0.00	0.36	0.36	5.60	P	A	U		F	540
546. Sasumua Lane	NCC 0546	Sas. Rd.	End	0.00	0.25	0.25	4.80	P	C	U		F	541
547. Sasumua Road	NCC 0547	K/K. Rd.	Chw. Rd.	0.00	0.75	0.75	7.00	P	A	U		F	542
548. Segga Close	NCC 0548	Kin. Rd.	End	0.00	0.06	0.06	4.80	P	C	U		F	543
549. Sudek Grove	NCC 0549	Lon. Rd.	Lon. Rd.	0.00	0.33	0.33	3.50	P	A	U		F	544
550. Sumba Road	NCC 0550	Muth. Av.	Mus. Rd.	0.00	0.29	0.29	5.30	P	L	U		F	545
551. Suna Road	NCC 0551	Adams	J/K. Rd.	0.00	0.38	0.38	5.60	P	A	U		F	546
552. Sungura Road	NCC 0552	Muh. Av.	Kai. Rd.	0.00	0.22	0.22	4.30	P	A	U		F	547
553. Thogoto Road	NCC 0553	Kab. Rd.	M/M. Rd.	0.00	0.15	0.15	5.30	P	C	U		F	548
554. Thuci Close	NCC 0554	Thu. Rd.	End	0.00	0.06	0.06	4.00	P	C	U		F	549
555. Thuci Road	NCC 0555	Kite. Rd.	Mwa. Rd.	0.00	0.11	0.11	5.00	P	C	U		F	550
556. Upper Hill Road	NCC 0556	L/H. Rd.	Matu. Rd.	0.00	1.06	1.06	5.30	P	A	U		F	551
557. Viazu Tamu Close	NCC 0557	V/T. Rd.	End	0.00	0.11	0.11	4.00	P	C	U		F	552
558. Viazu Tamu Road	NCC 0558	Rd. B	Podo. Rd.	0.00	0.13	0.13	4.50	P	C	U		F	553
559. Wamagata Road	NCC 0559	Kino Rd.	Rd. G	0.00	0.27	0.27	3.50	P	C	U		F	554
560. Wimbi Close	NCC 0560	Biro Rd.	End	0.00	0.11	0.11	4.10	P	C	U		F	555

**TABLE 4.3-4 (6) ROAD INVENTORY IN KILIMANI**

**AREA:** Nairobi

**ZONE:** Kilimani

**ZONE:** GIBB AFRICA

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
561. St. George S. Sch.	NCC 0561	D/Pritt	End	0.00	0.11	0.11	4.00	U(E)	C	U		B	556
562. Kikambala-Kieni Rd	NCC 0562	KIE Rd.	End	0.00	0.72	0.72	4.00	U(G)	C	U		F	557
Kikambala-Kieni Rd.	NCC 0562	KIE Rd.	End	0.72	1.23	0.51	4.00	U(E)	C	U		B	557
563. Kodhek Close	NCC 0563	A/K Rd.	End	0.00	0.10	0.10	4.00	P	C	U		F	558
564. Off Muthiora Rd.	NCC 0564	H/M/ Rd.	Git. Rd.	0.00	1.42	1.42	5.40	P		U		F	559
565. Opp. St. George Sch.	NCC 0565	D/P Rd.	End	0.00	0.11	0.11	4.00	P	C	U		F	560
566. 1st Ngong Avenue	NCC 0566	Bish Rd.	Ngo. Rd	0.00	0.34	0.34	6.00	P	A	U		F	561
567. 2nd Ngong Avenue	NCC 0567	Bish Rd.	Ngo. Rd	0.00	0.37	0.37	3.54	P	A	U		F	562
568. 3rd Ngong Avenue	NCC 0568	Val. Rd.	Ngo. Rd	0.00	0.52	0.52	4.80	P	A	U		F	563
569. 4th Ngong Avenue	NCC 0569	Bish Rd.	Ngo. Rd	0.00	0.24	0.24	5.54	P	A	U		F	564
570. 4th Ngong Ave. (Rsv.)	NCC 0570	Bish Rd.	Ngo. Rd	0.00	0.15	0.15	5.57	P	A	U		F	565
571. 5th Ngong Avenue	NCC 0571	Val. Rd.	Ngo. Rd	0.00	0.53	0.53	5.40	P	A	U		F	566
572. Amboseli Rd. (pt.1)	NCC 0572	Con. Dr.	Amb Rd.	0.00	0.35	0.35	5.13	P	D	U		F	567
573. Amboseli Rd. (pt.2)	NCC 0573	Amb Rd.	Hath Rd.	0.00	0.55	0.55	4.40	U(E)	L	U		B	568
574. Arboretum Drive	NCC 0574	R/R Kile	S/H Rd.	0.00	1.02	1.02	5.80	P	L	U		F	569
575. Arboretum Rd.	NCC 0575	S/H Rd.	End	0.00	0.43	0.43	4.90	P	C	U		F	570
576. Arg. Kodhek Rd. 1	NCC 0576	R/R Kile	Git. Rd.	0.00	0.43	0.43	5.36	P	D	U	B	F	571
577. Arg. Kodhek Rd. 2	NCC 0577	R/R Kile	R/B Rd.	0.00	2.18	2.18	8.10	P	D	U	B	F	572
578. Arg. Kodhek Rd. 3	NCC 0578	R/B Rd.	Koro. Rd	0.00	1.68	1.68	6.53	P	D	U		F	573
579. Bishops Rd.	NCC 0579	R/B Rd.	Ngo. Rd	0.00	0.97	0.97	5.80	P	A	U		F	574
580. Bamboo Lane	NCC 0580	Riar Rd.	End	0.00	0.12	0.12	4.00	U(E)	C	U		F	575
581. Cathedral Road	NCC 0581	Ngo. Rd.	H/S Ave.	0.00	0.46	0.46	7.40	P	A	U	M	F	576
582. Chaka Rd.	NCC 0582	Len. Rd.	A/K Rd.	0.00	0.44	0.44	5.63	P	D	U		F	577
583. Chalbi Drive	NCC 0583	Con. Dr.	Con. Rd.	0.00	1.33	1.33	4.30	P	A	U		F	578
584. Chania Avenue	NCC 0584	Men. Rd.	M/G Rd.	0.00	0.61	0.61	5.46	P	A	U		F	579
585. Church Road	NCC 0585	Wai. Rd.	End	0.00	0.47	0.47	5.50	P	C	U		F	580
Church Road	NCC 0585	Wai. Rd.	End	0.47	0.69	0.22	5.50	U(G)	C	U		G	580
586. Clyde Gardens	NCC 0586	King Rd.	End	0.00	0.11	0.11	4.00	U(E)	C	U		F	581
587. Covn. Drv. (pt.2)	NCC 0587	E/M Dr.	J/G Rd.	0.00	1.33	1.33	5.90	P	D	U		F	582
588. Covn. Drv. (pt.1)	NCC 0588	E/M Dr.	End	0.00	0.52	0.52	6.80	U(G)	C	U		F	583
589. Dagoretti Gardens	NCC 0589	Riar Rd.	End	0.00	0.19	0.19	4.69	P	C	U		F	584
590. David Osieli Rd.	NCC 0590	Wai. Wy.	End	0.00	0.80	0.80	5.01	P	C	U		F	585
591. Denis Pritt Rd.	NCC 0591	S/H Rd.	Gal. Rd.	0.00	1.72	1.72	5.80	P	D	U		F	586

**TABLE 4.3-4 (6) ROAD INVENTORY IN KILIMANI**

**AREA:** Nairobi

**ZONE:** Kilimani

**GIBB AFRICA**

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway condition B/F/G	Sheet No.
		Start (from)	End (to)	Start (from)	End (to)								
592. Diani Road	NCC 0592	O/O Rd.	End	0.00	0.30	0.30	4.00	U(E)	C	U		B	587
593. Dorobo Road	NCC 0593	Mam. Rd	Kive. Rd	0.00	0.50	0.50	5.60	P	A	U		F	588
594. East Church Rd.	NCC 0594	Rha. Rd	Lant. Rd	0.00	0.57	0.57	5.70	P		U		F	589
595. Elgeyo Marakwet Rd.	NCC 0595	Ngo. Rd.	End	0.00	0.86	0.86	5.58	P	C	U		F	590
596. Elmolo Drive	NCC 0596	J/G Rd.	Con. Dr.	0.00	0.60	0.60	6.40	P	L	U		F	591
597. Ewasongiro Park	NCC 0597	M/R W	End	0.00	0.60	0.60	4.60	P	C	U		F	592
598. Fox Close	NCC 0598	Rha. Rd	End	0.00	0.25	0.25	4.70	P	C	U		F	593
599. Galana Road	NCC 0599	D/P Rd.	A/K Rd	0.00	0.49	0.49	6.80	P	L	U		F	594
600. Garden Road	NCC 0600	R/S Dr.	End	0.00	0.33	0.33	4.80	P	C	U		F	595
601. Gatundu Close	NCC 0601	Gat. Rd.	End	0.00	0.19	0.19	4.60	P	C	U		F	596
602. Gatundu Crescent	NCC 0602	Gat. Rd.	End	0.00	0.28	0.28	4.70	P	C	U		F	597
603. Gatundu Road	NCC 0603	Man. Rd	Nye Rd.	0.00	0.84	0.84	5.90	P	A	U		F	598
604. Gedi Road	NCC 0604	J/G Rd.	End	0.00	0.11	0.11	5.30	P	C	U		F	599
605. Gem Lane	NCC 0605	Man. Rd	End	0.00	0.49	0.49	5.40	P	C	U		F	600
606. George Padmore Ln	NCC 0606	Kind Rd.	Ngo. Rd	0.00	0.18	0.18	5.58	U(E)		U		B	601
607. George Padmore Rd	NCC 0607	Rose Av	R/R Kil	0.00	0.77	0.77	4.00	U(E)	A	U		F	602
608. Gichuru Rd. (pt.1)	NCC 0608	Man. Rd	Gich. Rd	0.00	0.41	0.41	4.20	P		U		F	603
609. Gichuru Rd. (pt.2)	NCC 0609	Gich. Rd	End	0.00	0.05	0.05	5.20	P	C	U		F	604
610. Gitanga Close	NCC 0610	Git. Rd.	End	0.00	0.16	0.16	4.00	U(E)	C	U		B	605
611. Gitanga Road	NCC 0611	A/K Rd.	Mach Rd	0.00	3.75	3.75	6.95	P	L	U	B	F	606
612. Githunguri Road	NCC 0612	Kil. Rd.	Tab. Rd	0.00	0.65	0.65	3.90	P	L	U		F	607
613. Gusii Road	NCC 0613	Sya. Rd	End	0.00	0.15	0.15	4.00	P	C	U		F	608
614. Hamisi Road	NCC 0614	Mug. Rd	Sug. Rd	0.00	0.24	0.24	3.40	P	A	U		F	609
615. Hended Avenue	NCC 0615	Mba. Av.	Koro. Rd	0.00	0.09	0.09	5.50	P	L	U		F	610
616. Hended Avenue	NCC 0617	Mba. Av.	Koro. Rd	0.00	0.48	0.48	5.50	P		U		F	611
617. Hended Close	NCC 0618	Hen. Rd	End	0.00	0.07	0.07	4.40	P	C	U		F	612
618. Huri Close	NCC 0619	Ten. Dr.	End	0.00	0.12	0.12	4.00	P	C	U		F	613
619. Invergara Grove	NCC 0620	Van Rd.	End	0.00	0.11	0.11	4.00	U(E)	C	U		B	614
620. Isaac Gathanju Cls.	NCC 0621	I/G Rd.	End	0.00	0.23	0.23	3.88	P	C	U		F	615
621. Isaac Gathanju Rd.	NCC 0622	J/G Rd.	Con. Dr.	0.00	0.62	0.62	5.75	P	D	U		F	616
622. Ithuru Gardens	NCC 0623	Maki Rd	End	0.00	0.14	0.14	4.00	U(E)	C	U		F	617
623. Jabavu Road	NCC 0624	Cha. Rd	W/ld. Rd	0.00	1.01	1.01	6.34	P	A	U		F	618
624. Jacaranda Avenue	NCC 0625	Muth. Rd	Git. Rd.	0.00	1.15	1.15	5.55	P	L	U		F	619

**TABLE 4.3-4 (6) ROAD INVENTORY IN KILIMANI**

**AREA:** Nairobi

**ZONE:** Kilimani

**GIBB AFRICA**

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
625. James Gichuru Rd.	NCC 0625	Git. Rd.	Wai Wy.	0.00	4.22	4.22	9.20	P	D	U	M	F	620
626. Kabarsiran Av.	NCC 0626	Wai. Wy.	End	0.00	1.31	1.31	5.70	P	C	U		F	621
627. Kamburu Drive	NCC 0627	Ngo. Rd.	G/P. Rd.	0.00	0.34	0.34	4.00	U(E)	A	U		B	622
628. Kandara Road.	NCC 0628	Gat. Rd.	Gich. Rd	0.00	0.87	0.87	5.40	P	L	U		F	623
629. Kanjata Crescent	NCC 0629	Kan. Rd.	Kan. Rd.	0.00	0.46	0.46	5.30	P	A	U		F	624
630. Kanjata Road	NCC 0630	J/G Rd.	Wai Wy.	0.00	1.44	1.44	5.20	P	D	U		F	625
631. Kaputei Gardens Rd	NCC 0631	Kap. Rd.	Kap. Rd.	0.00	0.99	0.99	5.55	P	L	U		F	626
632. Kaputei Road	NCC 0632	Otha. Rd	K/G. Rd.	0.00	0.09	0.09	5.30	P	L	U		F	627
633. Kasuku Road	NCC 0633	Len. Rd.	Jab. Rd.	0.00	0.35	0.35	5.62	P	A	U		F	628
634. Kayahwe Road	NCC 0634	Denis/P	Gal. Rd.	0.00	0.63	0.63	5.60	P	A	U		F	629
635. Kenyatta Avenue	NCC 0635	UH/HWay	V/M' Rd.	0.00	0.90	0.90	12.80	P	L	U	B	F	630
636. Kieni Road	NCC 0636	Kan. Rd.	End	0.00	0.17	0.17	5.40	P	C	U		F	631
637. Kikambala Road	NCC 0637	Mak. Rd.	Mwi. Rd.	0.00	0.37	0.37	4.50	P	A	U		F	632
638. Kilimani Rd. (pt.1)	NCC 0638	Men. Rd.	Kiri. Rd.	0.00	0.27	0.27	5.22	P	L	U		F	633
639. Kilimani Rd. (pt.2)	NCC 0639	Kiri. Rd.	E/M. Rd.	0.00	0.28	0.28	5.15	U(E)	L	U		B	634
640. Kilimani Rd. (pt.3)	NCC 0640	E/M Rd.	Nde. Rd.	0.00	0.19	0.19	5.15	P	L	U		F	635
641. Kilimani Rd. (pt.4)	NCC 0641	Nde. Rd.	O/O. Rd.	0.00	0.37	0.37	5.15	U(E)	L	U		B	636
642. Kilungu Rd.	NCC 0642	Nde. Rd.	E/M. Rd.	0.00	0.28	0.28	5.37	P	A	U		F	637
643. Kindaruma Lane	NCC 0643	Kin. Rd.	Ngo. Rd	0.00	0.18	0.18	4.00	U(E)	A	U		B	638
644. Kindaruma Rd. (pt.1)	NCC 0644	Men. Rd.	Kin. Ln.	0.00	1.12	1.12	4.81	U(E)	A	U		B	639
645. Kindaruma Rd. (pt.2)	NCC 0645	Men. Rd.	Kiri. Rd.	0.00	0.41	0.41	5.48	P	A	U		F	640
646. Kingara Close	NCC 0646	King Rd.	End	0.00	0.19	0.19	4.00	U(E)	C	U		B	641
647. Kingara Road	NCC 0647	Ngo. Rd.	Gita. Rd.	0.00	1.01	1.01	6.78	P	A	U		F	642
648. Kirichwa Gradens	NCC 0648	Kiri. Rd.	End	0.00	0.16	0.16	4.00	P	C	U		F	643
649. Kirichwa Grove	NCC 0649	Riv. Dr.	End	0.00	0.07	0.07	3.30	P	C	U		F	644
650. Kirichwa Rd. (pt.1)	NCC 0650	Ngo. Rd.	End	0.00	0.82	0.82	5.64	P	C	U		F	645
651. Kirichwa Rd. (pt.2)	NCC 0651	A/K. Rd.	End	0.00	0.37	0.37	5.00	U(E)	C	U		B	646
652. Kivemia Road	NCC 0652	S/H. Rd.	Maml	0.00	0.30	0.30	5.60	P	A	U		F	647
653. K'leshwa Ring Rd. W	NCC 0653	R/S. Dr.	K'I R/R	0.00	0.93	0.93	4.92	P	D	U		F	648
654. Kolloh Road	NCC 0654	J/G Rd.	Muth. Rd	0.00	0.19	0.19	5.50	P	A	U		F	649
655. Komo Lane	NCC 0655	W/Av.	Kil. P/S	0.00	0.13	0.13	4.86	P	C	U		F	650
656. Komo Lane	NCC 0656	W/Av.	End	0.00	0.12	0.12	5.74	P	C	U		F	651
657. Korosho Road	NCC 0657	Kun. Rd.	Git. Rd.	0.00	0.49	0.49	5.93	P	L	U	M	F	652

**TABLE 4.3-4 (6) ROAD INVENTORY IN KILIMANI**

**AREA:** Nairobi

**ZONE:** Kilimani

**ZONE:** GIBB AFRICA

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
658. Kunde Close	NCC 0658	Kun Rd.	End	0.00	0.17	0.17	5.10	P	C	U		F	653
659. Kunde Road	NCC 0659	Mba. Rd.	Hen. Av	0.00	0.77	0.77	5.42	P		U		F	654
660. Laikipia Close	NCC 0660	Lai. Rd.	End	0.00	0.10	0.10	3.70	P	C	U		F	655
661. Laikipia Road	NCC 0661	Kile. Rd.	End	0.00	0.76	0.76	4.00	P	C	U		F	656
662. Langata Lane	NCC 0662	Lan. Rd.	End	0.00	0.29	0.29	6.40	P	C	U		F	657
663. Lantana Lane	NCC 0663	E/C Rd.	Wai Wy	0.00	1.20	1.20	5.50	P	A	U		F	658
664. Lenana Road	NCC 0664	Gal. Rd.	R/B. Rd.	0.00	2.51	2.51	5.60	P	D	U	B	F	659
665. Leroghi Gardens	NCC 0665	Mba. Av.	End	0.00	0.21	0.21	4.00	U(E)	C	U		B	660
666. Loiyangalani Dr.	NCC 0666	Cha. Dr.	Owa. Rd	0.00	0.60	0.60	3.50	P	A	U		F	661
667. Loreto Musongari Dr	NCC 0667	L/M Ln.	Kanj. Rd	0.00	0.32	0.32	5.60	P		U		F	662
668. Loreto Musongari Ln	NCC 0668	J/G. Rd.	End	0.00	0.09	0.09	5.40	P	C	U		F	663
669. Maalim Juma Rd.	NCC 0669	D/Pritt	Lenana	0.00	0.28	0.28	4.00	U(E)	A	U		B	664
670. Mageta Road	NCC 0670	Olen. Rd	Muth. Rd	0.00	1.12	1.12	5.43	P	L	U		F	665
671. Mahigu Mairu Av.	NCC 0671	Muth. Dr	ST.M Rd	0.00	0.31	0.31	5.20	U(G)	L	U		B	666
672. Maji-Mazuri Dr.	NCC 0672	J/G. Rd.	M/M Rd	0.00	0.12	0.12	5.75	P		U		F	667
673. Maji-Mazuri Rd.	NCC 0673	Mbab. Rd.	E/M Dr.	0.00	1.09	1.09	5.25	P	L	U		F	668
674. Makeni Road	NCC 0674	Nye Ri	Kika Rd.	0.00	0.31	0.31	4.90	P	A	U		F	669
675. Makindi Road	NCC 0675	Ngo. Rd.	End	0.00	0.48	0.48	4.00	U(G)	C	U		B	670
676. Makuyu Ln. (lenana)	NCC 0676	Lenana	End	0.00	0.08	0.08	5.69	P	C	U		F	671
677. Mamlaka Road	NCC 0677	S/H Rd.	Nye. Rd	0.00	1.16	1.16	6.80	P	L	U		F	672
678. Mandera road	NCC 0378	Kile. Rd.	Gat. Rd.	0.00	1.57	1.57	6.00	P	D	U		F	673
679. Manyani Lane East	NCC 0679	Ma. E. Rd.	End	0.00	0.54	0.54	4.70	P	C	U		F	674
680. Manyani Road East	NCC 0680	J/G. Rd.	M/W Rd	0.00	0.92	0.92	4.70	P	D	U		F	675
681. Manyani Road West	NCC 0681	Wai. Wy.	Kab. Av.	0.00	0.63	0.63	5.40	P	D	U		F	676
682. Mararo Avenue	NCC 0682	A/K. Rd.	Gita. Rd.	0.00	0.29	0.29	4.00	U(E)	A	U		B	677
683. Marcus Garvey Rd. 1	NCC 0683	A/K. Rd.	Kind Rd.	0.00	0.40	0.40	5.40	U(E)	A	U		B	678
684. Marcus Garvey Rd. 2	NCC 0684	A/K. Rd.	Kind Rd.	0.00	0.14	0.14	5.42	P	A	U		F	679
685. Mazera Road	NCC 0685	Sug. Rd.	Loi Rd.	0.00	0.25	0.25	4.90	P		U		F	680
686. Mbaazi Road (pt.1)	NCC 0686	Kin. Rd.	H/K. Jc	0.00	0.69	0.69	4.00	U(E)	L	U		B	681
687. Mbaazi Road (pt.2)	NCC 0687	Kin. Rd.	H/K. Jc	0.00	0.07	0.07	5.37	P		U		F	682
688. Mbabane Road	NCC 0688	J/G. Rd.	Muh. Av.	0.00	0.58	0.58	5.30	P	A	U		F	683
689. Mbooni Road	NCC 0689	Sug. Rd.	Maz. Rd.	0.00	0.29	0.29	4.20	P	A	U		F	684
690. Menelik Road	NCC 0690	Ngo. Rd.	A/K. Rd.	0.00	0.67	0.67	4.94	P	L	U		F	685

**TABLE 4.3-4 (6) ROAD INVENTORY IN KILIMANI**

**ZONE: Kilimani**

**AREA: Nairobi**

**ZONE: Kilimani**

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
691. Milimani Road	NCC 0691	D/P Rd.	Ken. Av	0.00	0.86	0.86	6.50	P		U		F	686
Milimani Road	NCC 0691	D/P Rd.	Ken. Av	0.86	1.24	0.38	6.50	U(E)		U		B	686
692. Mimosa Road	NCC 0692	Chu. Rd.	Mvu. Rd	0.00	0.49	0.49	2.20	U(E)	A	U		G	687
693. Miji Kenda Rd. (pt.1)	NCC 0693	Ole. Av.	Miji K. Rd	0.00	0.29	0.29	3.00	P	A	U		F	688
694. Miji Kenda Rd. (pt.2)	NCC 0694	Miji K. Rd	End	0.00	0.05	0.05	2.70	U(E)	C	U		B	689
695. Mogoiri Road	NCC 0695	Sug. Rd	Oth. Rd	0.00	0.36	0.36	5.00	P	D	U		F	690
696. Moudiri Road	NCC 0966	Man. Rd.	Lai Rd	0.00	0.26	0.26	5.70	P		U		F	691
697. Mitito Andei Road	NCC 0697	Jab. Rd	Len. Rd	0.00	0.32	0.32	4.00	U(E)		U		B	692
698. Mugumo Road	NCC 0698	Ole. Av.	J/G Rd.	0.00	0.99	0.99	5.50	P	D	U		F	693
699. Muhoya Avenue	NCC 0699	Mba. Rd	M/M Rd	0.00	1.45	1.45	4.65	P	A	U		F	694
700. Muhoya Close	NCC 0700	Muh. Av.	End	0.00	0.20	0.20	3.30	P	C	U		F	695
701. Mukoko Close	NCC 0701	Rha. Rd	End	0.00	0.18	0.18	4.00	U(G)	C	U		B	696
702. Muringa Rd. (pt.1)	NCC 0702	Nde. Rd	Men. Rd	0.00	0.29	0.29	4.00	U(E)	A	U		B	697
703. Muringa Rd. (pt.2)	NCC 0703	Nde. Rd	Men. Rd	0.00	0.29	0.29	5.68	P	L	U		F	698
704. Musa Gitau Road	NCC 0704	Wai. Wv.	End	0.00	0.55	0.55	5.60	P	C	U		F	699
705. Muthangari Close	NCC 0705	Muth. Rd	End	0.00	0.11	0.11	4.60	P	C	U		F	700
706. Muthangari Gardens	NCC 0706	Muth. Rd	Git. Rd	0.00	0.52	0.52	4.90	U(G)	L	U		B	701
707. Muthangari Road	NCC 0707	Mug. Rd	Git. Rd	0.00	1.10	1.10	5.50	P	D	U		F	702
708. Mvuli Road	NCC 0708	Wai. Wv.	E/C. Rd	0.00	0.50	0.50	5.30	P	A	U		F	703
709. Mwingi Road	NCC 0709	Kika. Rd	Nye. Rd	0.00	0.43	0.43	4.50	P	A	U		F	704
710. Mizima Spring Lane	NCC 0710	M/s Ln.	R/S Rd	0.00	0.45	0.45	5.20	P	A	U		F	705
711. Mizima Spring Road	NCC 0711	J/G. Rd.	Ole. Av.	0.00	1.47	1.47	5.30	P	D	U		F	706
712. Ndemi Close	NCC 0712	Nde. Rd	End	0.00	0.08	0.08	4.00	U(E)	C	U		B	707
713. Ndemi Road	NCC 0713	Kil. Rd.	Ngo. Rd	0.00	0.68	0.68	5.66	P	A	U		F	708
714. Ndoto Road	NCC 0714	J/G. Rd.	Mug. Rd	0.00	0.53	0.53	5.30	P	L	U		F	709
715. Ngong Road	NCC 0715	Ken. Av.	Ngo. B	0.00	6.89	6.89	8.10	P	P	U	B	F	710
716. Njumbi Road	NCC 0716	Cha. Dr.	Cha. Dr.	0.00	1.08	1.08	3.73	P	A	U		F	711
717. Nyangumi Avenue	NCC 0717	Len. Rd	D/Pritt	0.00	0.43	0.43	5.72	P	D	U		F	712
718. Nyerere Road	NCC 0718	Ken. Av.	S/H Rd	0.00	0.83	0.83	6.30	P	A	U		F	713
719. Nyeri Close	NCC 0719	Nye. Rd	End	0.00	0.07	0.07	3.60	P	C	U		F	714
720. Nyeri Road	NCC 0720	Gat. Rd.	Oth. Rd	0.00	0.54	0.54	5.30	P	A	U		F	715
721. O'washika Road	NCC 0721	Loi. Dr.	I/G Rd	0.00	0.88	0.88	4.70	P	L	U		F	716
722. Olenguruone Av.	NCC 0722	J/G. Rd.	Mug. Rd	0.00	0.91	0.91	6.20	P	D	U		F	717



**TABLE 4.3-4 (6) ROAD INVENTORY IN KILIMANI**

**AREA:** Nairobi

**ZONE:** Kilimani

**ZONE:** GIBB AFRICA

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
723. Ole Odume Road	NCC 0723	Ngo. Rd.	M/M Rd.	0.00	0.67	0.67	5.60	P	A	U		F	718
724. Olekejuado Road	NCC 0724	Gich. Rd	Kan. Rd	0.00	0.34	0.34	5.00	P		U		F	719
725. Oloitokitok Road	NCC 0725	Maz. Rd	Oled. Rd	0.00	0.36	0.36	5.40	P	D	U		F	720
726. Othaya Road	NCC 0726	Git. Rd	Nye. Rd	0.00	1.08	1.08	6.60	P	L	U		F	721
727. Pilidili way	NCC 0727	Rha. Rd	End	0.00	0.24	0.24	4.40	P	C	U		F	722
728. Processional Way	NCC 0728	Ken. Av.	H/S Ave.	0.00	0.80	0.80	13.00	P	A	U		F	723
729. Ralph Bunche Rd.	NCC 0729	S/H Rd.	Ngo. Rd	0.00	1.35	1.35	6.10	P	L	U		F	724
730. Ramisi Road	NCC 0730	Jac. Rd	J/G Rd.	0.00	0.14	0.14	5.60	P	A	U		F	725
731. Rhapta Road	NCC 0731	M/M Rd	Lant. Rd	0.00	2.05	2.05	5.50	P	A	U		F	726
732. Riara Close	NCC 0732	Ria. Rd	End	0.00	0.18	0.18	4.00	U(E)	C	U		F	727
733. Riara Gardens	NCC 0733	Ria. Rd	End	0.00	0.33	0.33	4.00	U(E)	C	U		F	728
734. Riara Lane	NCC 0734	Ria. Rd	End	0.00	0.24	0.24	4.00	U(E)	C	U		B	729
735. Riara Rd. (Kingara)	NCC 0735	Dago Rd	King. Rd	0.00	0.63	0.63	5.53	P	L	U		F	730
736. Riara Road	NCC 0736	King Rd.	O/O Rd	0.00	1.47	1.47	6.61	P	L	U		F	731
737. Ring Road Kilimani	NCC 0737	Ngo. Rd.	A/K Rd.	0.00	0.82	0.82	6.77	P	D	U	B	F	732
738. Riverside Drive	NCC 0738	J/G. Rd	Chi. Rd	0.00	3.21	3.21	6.60	P	A	U		F	733
739. Riverside Gardens	NCC 0739	R/Dr	End	0.00	0.25	0.25	5.40	P	C	U		F	734
740. Riverside Grove	NCC 0740	R/Dr	End	0.00	0.24	0.24	6.30	P	C	U		F	735
741. Riverside Lane	NCC 0741	R/Dr	End	0.00	0.57	0.57	4.20	P	C	U		F	736
742. Riverside Paddocks	NCC 0742	R/Dr	R/Dr	0.00	0.60	0.60	5.70	P	C	U		F	737
743. Riverside W/Lane	NCC 0743	R/Dr	End	0.00	0.15	0.15	4.00	P	C	U		F	738
744. Rose Avenue (pt.1)	NCC 0744	Ngo. Rd.	A/K Rd.	0.00	0.99	0.99	5.40	U(E)	A	U		B	739
745. Rose Avenue (pt.2)	NCC 0745	D/Pritt	A/K Rd.	0.00	0.35	0.35	4.00	U(E)	A	U		F	739
746. Service Road	NCC 0746	SF/HC	Rose Av.	0.00	0.46	0.46	5.39	P	A	U		F	740
747. Siaya Road	NCC 0747	Gatu. Rd	Gusi Av.	0.00	0.49	0.49	4.90	P	A	U		F	741
748. Sports Road	NCC 0748	Mvu Rd	Lant. Rd	0.00	1.00	1.00	5.70	P	D	U		F	742
749. St. Michael's Rd.	NCC 0749	Chu. Rd	Rha. Rd	0.00	0.69	0.69	5.20	P	A	U		F	743
750. State Hse. Avenue	NCC 0750	S/H Rd.	Keny. Av.	0.00	0.89	0.89	7.90	P	L	U		F	744
751. State Hse. Road	NCC 0751	Nye. Rd	D/Pritt	0.00	3.04	3.04	7.30	P		U		F	745
752. State Hse. Cresent	NCC 0752	S/H Rd.	S/H Rd.	0.00	0.51	0.51	5.60	P	L	U		F	746
753. Suguta Road	NCC 0753	Ka Gd's	Maku Rd	0.00	0.66	0.66	5.10	P	A	U		F	747
754. Tabere Cresent	NCC 0754	Gith. Rd	Kang Rd	0.00	0.97	0.97	4.93	P	L	U		F	748
755. Tangundo Road	NCC 0755	Tab. Crs	R/R Kile	0.00	0.29	0.29	3.90	P	L	U		F	749



TABLE 4.3-4 (7) ROAD INVENTORY IN LANGATA

ROAD INVENTORY AREA: Nairobi ZONE: Langata GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
771. Water T. Works	NCC 0771	Coop. Col	W/T. Wrk	0.00	0.49	0.49	4.00	U(E)	A	U	M	B	765
772. Fr. Langata Rd. Rda	NCC 0772	Lan. Rd	End	0.00	1.26	1.26	4.00	P	C	U		F	766
773. Avocado Lane	NCC 0773	Mag. Rd	Kipe. Rd	0.00	0.53	0.53	3.50	U(E)		U		B	767
774. Banda Lane	NCC 0774	Kib. Rd	Muk. Rd	0.00	1.26	1.26	4.90	U(G)	L	U		B	768
775. Bogani East Road	NCC 0775	Bog. Rd.	Mag. Rd	0.00	1.78	1.78	4.50	U(E)	A	U		F	769
776. Bogani Road	NCC 0776	Kar. Rd	Lan. S. Rd	0.00	3.82	3.82	4.50	P	A	U	M	B	770
777. Chui Lane	NCC 0777	Koi Rd	End	0.00	0.42	0.42	2.70	P	C	U		B	771
778. Cramti Road	NCC 0778	Pon. Rd	Kulu. Rd	0.00	0.30	0.30	4.00	U(G)		U		F	772
779. Dik Dik Lane	NCC 0779	Lam. Rd	End	0.00	0.22	0.22	3.10	P	C	U		B	773
780. Dorobo Road	NCC 0780	Muk. Rd	End	0.00	0.75	0.75	4.55	U(E)	C	U		F	774
781. Durna Road	NCC 0781	Nyu. Rd	End	0.00	0.22	0.22	5.25	P	C	U		B	775
782. Forest Edge Road	NCC 0782	Lan. Rd	End	0.00	1.58	1.58	3.70	P	C	U		F	776
783. Gogo Falls Lane	NCC 0783	G/F Rd	End	0.00	0.28	0.28	4.00	P	C	U		B	777
784. Gogo Falls Road	NCC 0784	Koit. Rd	Duma Rd	0.00	0.38	0.38	4.00	U(E)	L	U		B	778
785. Kasulu Drive	NCC 0785	Bog. Rd.	End	0.00	0.78	0.78	4.10	U(G)	C	U		F	779
786. Kawimbi Road	NCC 0786	Lan. Rd	End	0.00	1.30	1.30	4.00	U(E)	C	U		B	780
787. Kibembe Lane	NCC 0787	Kib. Rd	Mag. Rd	0.00	0.58	0.58	3.73	U(E)	A	U		B	781
788. Kibembe Road	NCC 0788	Kibo. Rd	Ban Ln	0.00	0.90	0.90	3.90	U(E)	L	U		B	782
789. Kibo Lane	NCC 0789	M/W. Rd	End	0.00	0.69	0.69	4.70	U(G)	C	U		B	783
790. Kiboko Road	NCC 0790	Kipe. Rd	Muko. Rd	0.00	1.18	1.18	3.75	U(E)		U		B	784
791. Kikenni Drive	NCC 0791	Kike. Rd	End	0.00	0.45	0.45	4.90	P	C	U		B	785
792. Kikenni Lane (pt.1)	NCC 0792	Tum. Rd	Kike. Ln	0.00	0.37	0.37	3.00	U(G)		U		B	786
793. Kikenni Lane (pt.2)	NCC 0793	Kike. Rd	Tum. Rd	0.00	0.46	0.46	3.00	U(E)		U		F	787
794. Kikenni Road	NCC 0794	Muk. Rd	Doro. Rd	0.00	0.90	0.90	4.70	P	A	U		F	788
795. Kirna Road	NCC 0795	Tum. Rd	End	0.00	0.70	0.70	5.30	P	C	U		F	789
796. Kipevu Road	NCC 0796	Mag. Rd	Ush. Rd	0.00	1.55	1.55	4.30	P	L	U		B	790
797. Koitobos Road	NCC 0797	Mil. Rd	Ush. Rd	0.00	2.16	2.16	5.20	P	L	U		F	791
798. Kongoni Road	NCC 0798	Kulo. Rd	Ush. Rd	0.00	0.41	0.41	4.00	U(G)		U		B	792
799. Kosoimo Road	NCC 0799	Nde. Rd	End	0.00	1.05	1.05	3.80	P	C	U		B	793
800. Kulo Road	NCC 0800	Cra. Rd	End	0.00	1.14	1.14	4.00	U(G)	C	U		B	794
801. Kumbe Road	NCC 0801	Bog. Rd.	End	0.00	0.52	0.52	4.00	U(E)	C	U		B	795
802. Kwarara Road	NCC 0802	Mba. Rd	Nde. Rd	0.00	0.61	0.61	4.00	U(E)	A	U		B	796

TABLE 4.3-4 (7) ROAD INVENTORY IN LANGATA

AREA: Nairobi ZONE: Langata GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
803. Lamwata Road	NCC 0803	Mili. Rd	Koit. Rd	0.00	1.96	1.96	4.20	P	A	U		B	797
804. Langata North Lane	NCC 0804	Lan Rd	Kif. Rd	0.00	1.35	1.35	3.80	U(E)		U		B	798
805. Langata Road (1)	NCC 0805	Ngo/Kare	Uh/Ms'r	0.00	4.82	4.82	5.50	P	D	U	B	F	799
806. Langata Road (2)	NCC 0806	Ngo/Kare	Uh/Ms'r	0.00	4.67	4.67	5.50	P	D	U	B	F	800
807. Langata South	NCC 0807	Lan. Rd	Kif. Rd	0.00	2.68	2.68	5.20	P	L/A/C)	U		F	801
808. Masai Lane	NCC 0808	M/W. Rd	Bog. Rd	0.00	0.64	0.64	5.00	P	A	U		F	802
809. Masai Road	NCC 0809	Ush. Rd	M/W. Rd.	0.00	0.61	0.61	5.00	U(E)	A	U		B	803
810. Masai West Road	NCC 0810	Ush. Rd	Masai Ln.	0.00	1.69	1.69	4.50	P	A	U	M	F	804
811. Mbagathi Lane	NCC 0811	Mili. Rd	End	0.00	0.28	0.28	3.35	P	C	U		F	805
812. Mbari Road	NCC 0812	Bog. Rd.	Kwa. Rd	0.00	0.76	0.76	4.00	U(E)		U		B	806
813. Mdofo Lane	NCC 0813	Lan. Rd	End	0.00	0.37	0.37	3.65	P	C	U		F	807
Mdofo Lane	NCC 0813	Lan. Rd	End	0.37	0.69	0.32	3.65	U(E)	C	U		B	807
814. Miliima Road	NCC 0814	Kima. Rd	End	0.00	2.01	2.01	4.00	P	C	U		F	808
815. Mokoyeti East Road	NCC 0815	Lan. Rd	Mok'w/Rd	0.00	1.25	1.25	4.00	U(E)		U		B	809
816. Mokoyeti West Road	NCC 0816	Lan. Rd	Mok'w/Rd	0.00	1.48	1.48	3.80	U(E)		U		B	810
817. Muhuti Road	NCC 0817	Mun. Rd	End	0.00	0.69	0.69	4.90	P	C	U		F	811
818. Muiri Lane	NCC 0818	Lan. Rd	Mui. Rd	0.00	0.49	0.49	4.60	P	A	U		F	812
819. Muiri Road	NCC 0819	F/E Rd	End	0.00	0.46	0.46	4.14	P	C	U		F	813
Muiri Road	NCC 0819	F/E Rd	End	0.46	1.04	0.58	4.14	U(E)	C	U		B	813
820. Mukinduri Road	NCC 0820	F/E Rd	End	0.00	0.48	0.48	3.80	P	C	U		F	814
Mukinduri Road	NCC 0820	F/E Rd	End	0.48	1.10	0.62	3.80	U(G)	C	U		B	814
Mukinduri Road	NCC 0820	F/E Rd	End	1.10	1.36	0.26	3.80	U(E)	C	U		B	814
821. Mukoma Road	NCC 0821	F/E Rd	End	0.00	1.50	1.50	4.30	P	C	U		B	815
Mukoma Road	NCC 0821	F/E Rd	End	1.50	2.15	0.65	4.30	U(E)	C	U		F	815
822. Munderendu Road	NCC 0822	Doro. Rd	End	0.00	0.43	0.43	3.55	P	C	U		F	816
Munderendu Road	NCC 0822	Doro. Rd	End	0.43	0.59	0.16	3.55	U(E)	C	U		F	816
823. Murishu Road	NCC 0823	F/E Rd	End	0.00	0.52	0.52	3.50	P	C	U		F	817
Mutamaiyu Road	NCC 0824	Doro. Rd	End	0.00	0.39	0.39	5.00	P	C	U		F	818
Mutamaiyu Road	NCC 0824	Doro. Rd	End	0.39	0.48	0.09	5.00	U(G)	C	U		B	818
825. Ndege Road	NCC 0825	Lan. Rd	Bog. Rd	0.00	2.28	2.28	4.32	P	L	U		B	819
826. Ndovu Road	NCC 0826	Kipe. Rd	End	0.00	0.73	0.73	4.00	P	C	U		F	820
827. Nyumbu Road	NCC 0827	Duma Rd	Kima. Rd	0.00	0.42	0.42	5.40	P		U		F	821
828. Nzohe Road	NCC 0828	Bog. Rd.	Kalu. Rd	0.00	0.67	0.67	4.00	U(E)		U		B	822



TABLE 4.3-4 (8) ROAD INVENTORY IN MAKADARA

ROAD INVENTORY AREA: Nairobi ZONE: Makadara GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
838. Golden Gate Dr.	NCC 0838	Mwa. Rd.	End	0.00	0.42	0.42	5.30	P	C	U		F	830
839. Golden Gate, Rd. A	NCC 0839	Kap. Rd.	End	0.00	0.73	0.73	5.40	P	C	U		F	831
840. Industrial, Rd. A	NCC 0840			0.00	0.19	0.19	6.80	P		U		F	832
841. Industrial, Rd. C	NCC 0841	Ent. Rd.	Rd. C4	0.00	0.63	0.63	7.50	P	A	U		F	833
842. Industrial, Rd. C2	NCC 0842	Rd. C1	End	0.00	0.30	0.30	7.50	P	C	U		F	834
843. Industrial, Rd. C3	NCC 0843	Rd. C6	Rd. C4	0.00	0.56	0.56	7.80	P	L	U		F	835
844. Industrial, Rd. C4	NCC 0844	Rd. C	Rd. C3	0.00	0.48	0.48	8.10	P	A	U		F	836
845. Industrial, Rd. C5	NCC 0845	Rd. C3	End	0.00	0.50	0.50	7.40	P	C	U		F	837
846. Industrial, Rd. C6	NCC 0846	Rd. C2	Rd. C3	0.00	0.31	0.31	7.50	P	L	U		F	838
847. Industrial, Rd. C7	NCC 0847	Rd. C1	Rd. C4	0.00	0.18	0.18	7.80	P	L	U		F	839
848. Industrial, Rd. D	NCC 0848	Rd. C4	Vet/Sta.	0.00	0.40	0.40	4.00	U(E)		U		F	840
849. Industrial, Rd. D1	NCC 0849	Rd. D	Ken. Vet	0.00	0.29	0.29	4.00	U(E)		U		F	841
850. Industrial, Rd. E	NCC 0850	Ent. Rd.	End	0.00	0.27	0.27	6.50	P	C	U		F	842
851. Katolani Est. Rd. A	NCC 0851	Sta. Rd.	S. Bin. S	0.00	0.32	0.32	4.00	P	A	U		F	843
852. Katolani Est. Rd. B	NCC 0852	Sta. Rd.	Njia Kuu	0.00	0.27	0.27	4.30	P	A	U		F	844
853. Katolani Est. Rd. C	NCC 0853	S. Bin. S	Masa. Ln.	0.00	0.11	0.11	4.30	P	A	U		F	845
854. Katolani Est. Rd. D	NCC 0854	Jog. Rd.	Njia Kuu	0.00	0.30	0.30	4.80	P	A	U		F	846
855. Katolani Est. Rd. E	NCC 0855	Jog. Rd.	Njia Kuu	0.00	0.16	0.16	5.70	P	A	U		F	847
856. Lunga Lunga Rd. B	NCC 0856	L/L. Rd.	L/L. Rd.	0.00	0.34	0.34	9.00	P	A	U		F	848
857. Lusaka Rd, Rd. D	NCC 0857	W/S. Rd.	W/S. Rd.	0.00	0.49	0.49	7.00	P	D	U	B	F	849
858. Lusaka Rd, Rd. F	NCC 0858	S/L. Rd.	Dun. Rd.	0.00	0.27	0.27	7.00	P		U	B	F	850
859. Makongeni Est. Rd. A	NCC 0859	J/R. Fen	Rd. B	0.00	0.77	0.77	4.00	P	A	U		F	851
860. Makongeni Est. Rd. B	NCC 0860	Fen. Kal.	Fen. R/W	0.00	0.54	0.54	6.00	P	A	U		F	852
861. Makongeni Est. Rd. C	NCC 0861	Main Gate	End	0.00	0.75	0.75	6.00	P	C	U		F	853
862. Makongeni Est. Rd. D	NCC 0862	Rd. C	End	0.00	0.32	0.32	6.00	P	C	U		F	854
863. Makongeni Est. Rd. E	NCC 0863	Rd. C	End	0.00	0.31	0.31	4.00	P	C	U		F	855
864. Makongeni Est. Rd. F	NCC 0864	Rd. C	End	0.00	0.32	0.32	4.00	P	C	U		F	856
865. Makongeni Est. Rd. G	NCC 0865	Rd. C	End	0.00	0.32	0.32	5.00	P	C	U		F	857
866. Makongeni Est. Rd. H	NCC 0866	Rd. C	Rd. C	0.00	0.96	0.96	6.00	P	A	U		F	858
867. Makongeni Est. Rd. J	NCC 0867	Rd. H	Rd. H	0.00	0.15	0.15	6.00	P		U		F	859
868. Makongeni Est. Rd. K	NCC 0868	Rd. C	Rd. H	0.00	0.42	0.42	6.00	P		U		F	860
869. Makongeni Est. Rd. L	NCC 0869	Rd. H	Rd. K	0.00	0.31	0.31	6.00	P		U		F	861
870. Makongeni Est. Rd. M	NCC 0870	Kal. Fen.	Rd. C	0.00	0.49	0.49	5.00	P		U		F	862

TABLE 4.3-4 (8) ROAD INVENTORY IN MAKADARA

ROAD INVENTORY AREA: Nairobi ZONE: Makadara GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
871. Makongeni Est. Rd. N	NCC 0871	Kal. Fen.	Rd. C	0.00	0.42	0.42	5.00	P	A	U		F	863
872. Makongeni Est. Rd. Q	NCC 0872	Kal. Fen.	Rd. C	0.00	0.42	0.42	6.00	P	A	U		F	864
873. Makongeni Est. Rd. R	NCC 0873	Kal. Fen.	Rd. C	0.00	0.42	0.42	6.00	P	A	U		F	865
874. Makongeni Est. Rd. S	NCC 0874	Kal. Fen.	Rd. C	0.00	0.42	0.42	6.00	P	A	U		F	866
875. Makongeni Est. Rd. T	NCC 0875	Kal. Fen.	Rd. C	0.00	0.42	0.42	6.00	P	A	U		F	867
876. Makongeni Est. Rd. U	NCC 0876	Jog. Fen.	I/A. Fen	0.00	0.70	0.70	6.00	P	A	U		F	868
877. Riverbank Est. Rd. A	NCC 0877	Aok. Rd.	Rd. B	0.00	0.22	0.22	5.00	P		U		F	869
878. Riverbank Est. Rd. B	NCC 0878	Rd. A	Rd. D	0.00	0.38	0.38	5.00	P		U		F	870
879. Riverbank Est. Rd. C	NCC 0879	Rd. B	End	0.00	0.32	0.32	5.00	P	C	U		F	871
880. Riverbank Est. Rd. D	NCC 0880	Rd. C	End	0.00	0.27	0.27	5.00	P	C	U		F	872
881. Fr. Shule Rd, Rd. 19	NCC 0881	Shul. Rd.	End	0.00	0.11	0.11	4.60	P	C	U		F	873
882. Fr. Shule Rd, Rd. 20	NCC 0882	Shul. Rd.	End	0.00	0.08	0.08	4.60	P	C	U		F	874
883. Fr. Uaso Rd, Rd. 14	NCC 0883	Uaso Rd.	Mut. Rd.	0.00	0.10	0.10	5.40	P		U		F	875
884. Addis Ababa Road	NCC 0884	Ent. Rd.	End	0.00	0.48	0.48	6.00	P	C	U		F	876
885. Amasya Crescent	NCC 0885	M/S. Rd.	M/S. Rd.	0.00	0.82	0.82	7.70	P		U		F	877
886. Aoko Road	NCC 0886	Mwa. Rd.	Mch. Rd.	0.00	0.48	0.48	6.70	P	A	U		F	878
887. Athi River Road	NCC 0887	A/B. Rd.	End	0.00	0.42	0.42	6.00	P	C	U		F	879
888. Bamburi Road	NCC 0888	Ent. Rd.	End	0.00	0.52	0.52	6.50	P	C	U		F	880
889. Bandari Road	NCC 0889	Dun. Rd.	End	0.00	0.26	0.26	6.00	P	C	U		F	881
890. Baraza Road	NCC 0890	Ham. Rd.	Ham. Rd.	0.00	0.61	0.61	4.40	P	A	U		F	882
891. Baricho road	NCC 0891	Bun. Rd.	Lus. Rd.	0.00	0.58	0.58	8.00	P	D	U		F	883
892. Baringo Road	NCC 0892	Ng'ri. Rd.	Jin. Rd.	0.00	0.13	0.13	4.30	P	A	U		F	884
893. Bondo Road	NCC 0893	Dun. Rd.	End	0.00	0.15	0.15	5.00	P	C	U		F	885
894. Bumbani Road	NCC 0894	M/S. Rd.	End	0.00	0.58	0.58	6.00	P	C	U		F	886
895. Bungoma Road	NCC 0895	Bar. Rd.	End	0.00	0.20	0.20	7.00	P	C	U		F	887
896. Bunyala Road	NCC 0896	Com. Rd.	UH. H/W	0.00	0.54	0.54	9.00	P	D	U	M	F	888
897. Busama Close	NCC 0897	Shu. Rd.	B/B. Rd.	0.00	0.09	0.09	4.70	P		U		F	889
898. Busia Road	NCC 0898	Ent. Rd.	Ent. Rd.	0.00	0.64	0.64	9.00	P	A	U		F	890
899. Butere Road	NCC 0899	Chu. Rd.	Ban. Rd.	0.00	0.53	0.53	8.00	P	L	U		F	891
900. Changamwe Road	NCC 0900	Ent. Rd.	End	0.00	0.66	0.66	6.40	P	L	U		F	892
901. Charles New Road	NCC 0901	Nile Rd.	Raba. Rd.	0.00	0.89	0.89	6.60	P	A	U		F	893
902. Chege Kabiru Road	NCC 0902	Lai. Rd.	Mum. Rd.	0.00	0.44	0.44	6.30	P	A	U		F	894
903. Chepketio Road	NCC 0903	Hoi. Rd.	Lus. Rd.	0.00	0.32	0.32	7.00	P	L	U		F	895

TABLE 4.3-4 (8) ROAD INVENTORY IN MAKADARA

AREA: Nairobi

ZONE: Makadara

ZONE: Makadara

ROAD INVENTORY

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
904. Chogoria Road	NCC 0904	Dun. Rd.	End	0.00	0.26	0.26	6.00	P	C	U		F	896
905. Chuka Road	NCC 0905	Dar. Rd.	Bute. Rd.	0.00	0.11	0.11	7.00	P		U		F	897
906. Clesoi Close	NCC 0906	Cle. Rd.	End	0.00	0.21	0.21	7.50	P	C	U		F	898
907. Clesoi Road	NCC 0907	L/L. Rd.	Cle. Cl	0.00	0.55	0.55	7.50	P		U		F	899
908. Commercial Street	NCC 0908	Buny. Rd.	End	0.00	1.02	1.02	9.00	P	C	U		F	900
909. Dai Dai Road	NCC 0909	Zan. Rd.	Mko. Rd.	0.00	0.57	0.57	6.60	P	L	U		F	901
910. Dakar Road	NCC 0910	Ent. Rd.	End	0.00	0.67	0.67	5.00	P	C	U		F	902
911. Dar-Es-Salaam Road	NCC 0911	Dun. Rd.	Ent. Rd.	0.00	0.73	0.73	10.00	P	D	U		F	903
912. Dondori Road	NCC 0912	Dun. Rd.	S/L. Rd.	0.00	0.28	0.28	7.00	P	A	U		F	904
913. Dunga Road	NCC 0913	M/D. Rd.	W/S. Rd.	0.00	0.63	0.63	9.00	P	D	U		F	905
914. Ena Road	NCC 0914	Nzui. Rd.	End	0.00	0.04	0.04	5.60	P	C	U		F	906
915. Enterprise Road (pt.1)	NCC 0915	Msa. Rd.	Lagut	0.00	0.78	0.78	9.80	P	P	U	M	F	907
916. Enterprise Road (pt.2)	NCC 0916	Lagut	Isio. Rd.	0.78	2.12	1.34	7.00	P	P	U	M	F	908
917. Enterprise Road (pt.3)	NCC 0917	Fac. St.	Isio. Rd.	2.12	4.15	2.03	18.00	P	P	U	M	F	909
918. Factory Street	NCC 0918	Bun. Rd.	Ent. Rd.	0.00	1.30	1.30	7.00	P	A	U		F	910
919. Funzi Road	NCC 0919	Ent. Rd.	End	0.00	0.91	0.91	6.00	P	C	U		F	911
920. Gakoe Road	NCC 0920	Cle. Rd.	End	0.00	0.39	0.39	7.00	U(G)	C	U		F	912
921. Garissa Road	NCC 0921	Ngi. Rd.	Nji. Rd.	0.00	0.17	0.17	3.50	P	A	U		F	913
922. Gilgil Road	NCC 0922	Ent. Rd.	End	0.00	0.81	0.81	6.40	P	C	U		F	914
923. Gura Close	NCC 0923	C/N. Rd.	End	0.00	0.07	0.07	4.70	P	C	U		F	915
924. Guthera Crescent	NCC 0924	Sore. Rd.	G/G. Dr.	0.00	0.29	0.29	4.00	P	A	U		F	916
925. Guthera Lane	NCC 0925	Sore. Ln.	Guth. Circ.	0.00	0.07	0.07	5.00	P	A	U		F	917
926. Hadesa Close	NCC 0926	Sore. Rd.	End	0.00	0.20	0.20	5.00	U(G)	C	U		F	918
927. Hamza Road	NCC 0927	Jog. Rd.	Jog. Rd.	0.00	1.12	1.12	5.50	P	L	U	M	F	919
928. Hola Road	NCC 0928	Bar. Rd.	Chep. Rd.	0.00	0.20	0.20	7.00	P	A	U		F	920
929. Homa Bay Road	NCC 0929	Ent. Rd.	End	0.00	0.64	0.64	6.30	P	C	U		F	921
930. Homba Road	NCC 0930	Bar. Rd.	End	0.00	0.14	0.14	6.70	P	C	U		F	922
931. Hono Close	NCC 0931	Hono. Circ.	End	0.00	0.22	0.22	4.70	P	C	U		F	923
932. Hono Crescent	NCC 0932	Shu. Rd.	Hono. Crs.	0.00	0.76	0.76	5.30	P	A	U		F	924
933. Hono Road	NCC 0933	Shu. Rd.	Hono. Crs.	0.00	0.17	0.17	5.40	P	A	U		F	925
934. Isiolo Road	NCC 0934	Ent. Rd.	End	0.00	0.49	0.49	6.00	P	C	U		F	926
935. Jiroro Road	NCC 0935	Ent. Rd.	End	0.00	0.29	0.29	7.10	P	C	U		F	927
936. Jogoo Road	NCC 0936	Landhies	O/R. Rd.	0.00	3.65	3.65	13.60	P	P	U	B	F	928



TABLE 4.3-4 (8) ROAD INVENTORY IN MAKADARA

ROAD INVENTORY AREA: Nairobi ZONE: Makadara GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)	Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)									
937. Kabiru Road	NCC 0937	Dai Dai Rd	Dai Dai Rd	0.00	0.29	6.00	P	A	U		F	929
938. Kabras Road	NCC 0938	Muk. Rd.	End	0.00	0.20	5.00	P	C	U		F	930
939. Kampala Rd. (pt.1)	NCC 0939	Ent. Rd.	End	0.00	0.58	6.90	P	C	U		F	931
940. Kampala Rd. (pt.2)	NCC 0940	Ent. Rd.	End	0.58	1.36	6.30	P	C	U		F	932
941. Kapiti Crescent	NCC 0941	Kapi. Rd.	Kapi. Rd.	0.00	0.30	4.70	P	A	U		F	933
942. Kapiti Road	NCC 0942	Mko. Rd.	M/A. Rd.	0.00	0.71	6.50	P	A	U		F	934
943. Katulo Road	NCC 0943	M/S. Rd.	Rabai. Rd.	0.00	0.51	5.30	P	A	U		F	935
944. Kandong Road	NCC 0944	Dai Dai Rd	Dai Dai Rd	0.00	0.30	4.60	P	A	U		F	936
945. Khanga Road	NCC 0945	Nzui Rd.	End	0.00	0.10	5.70	P	C	U		F	937
946. Kilifi Close	NCC 0946	Kili. Rd.	Sore. Rd.	0.00	0.22	4.80	P	A	U		F	938
947. Kilimambogo Road	NCC 0947	Jog. Rd.	Njia Rd.	0.00	0.44	6.00	P	L	U		F	939
948. Kitui Road	NCC 0948	Kam. Rd.	End	0.00	0.94	6.40	P	C	U		F	940
949. Kivu Road	NCC 0949	Uaso. Rd.	Rui. Crs.	0.00	0.60	4.70	P	A	U		F	941
950. Krapf Road	NCC 0950	Nji. Rd.	Jin. Rd.	0.00	0.25	7.00	P	A	U		F	942
951. Laibon Road	NCC 0951	C/K. Rd.	End	0.00	0.52	4.70	P	C	U		F	943
952. Lambwe Close	NCC 0952	C/N. Rd.	End	0.00	0.13	4.70	P	C	U		F	944
953. Lanet Road	NCC 0953	Chep. Rd.	Bari. Rd.	0.00	0.20	7.00	P	D	U		F	945
954. Laset Road	NCC 0954	Muta. Rd.	End	0.00	0.24	4.50	P	C	U		F	946
955. Likoni Road	NCC 0955	Ent. Rd.	Jog. Rd.	0.00	2.17	9.00	P	D	U	M	F	947
956. Lokitaung Road	NCC 0956	Lik. Rd.	Lusi. Rd.	0.00	0.62	6.70	P	D	U		F	948
957. Londiani Rd. (pt.1)	NCC 0957	Lik. Rd.	Lik. Rd.	0.00	0.09	6.70	P	A	U		F	949
958. Londiani Rd. (pt.2)	NCC 0958	Lik. Rd.	Lik. Rd.	0.09	0.43	6.70	U(E)	A	U		F	950
959. Luka Road	NCC 0959	Mak. Av.	Mak. Av.	0.00	0.41	3.90	P	A	U		F	951
960. Lukose Drive	NCC 0960	Insi. Rd.	Msa. Rd.	0.00	0.14	5.50	P	P	U		F	952
961. Lunga Lunga Road	NCC 0961	Jog. Rd.	Liko. Rd.	0.00	3.97	9.00	P	P	U	M	F	953
962. Lunga Lunga Road A	NCC 0962	L/L. Rd.	End	0.00	0.19	6.80	P	C	U		F	954
963. Lunga Lunga Road C	NCC 0963	Rd. D	End	0.00	0.28	7.00	P	C	U		F	955
"	NCC 0963	Rd. D	End	0.28	0.63	7.00	U(E)	C	U		B	955
964. Lunga Lunga Road E	NCC 0964	Sasa Rd.	Rd. D	0.00	0.58	7.50	P	P	U		F	956
965. Lunga Lunga Road F	NCC 0965	Loki. Rd.	Loki. Rd.	0.00	0.59	6.50	P	P	U		F	957
966. Lusaka Close	NCC 0966	Pem. St.	End	0.00	0.21	5.00	P	C	U		F	958
967. Lusaka Road (pt.1)	NCC 0967	Msa. Rd.	Ent. Rd.	0.00	1.23	12.50	P	D	U	M	F	959
968. Lusaka Road (pt.2)	NCC 0968	Ent. Rd.	Jog. Rd.	1.23	2.15	13.40	P	D	U	M	F	960

TABLE 4.3-4 (8) ROAD INVENTORY IN MAKADARA

AREA: Nairobi

ZONE: Makadara

ZONE: Makadara

ROAD INVENTORY

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
969. Lusaka Road C	NCC 0969	Lus. Rd.	End	0.00	0.81	0.81	7.00	P	C	U		F	961
970. Lusingeti Road	NCC 0970	Lik. Rd.	Loki. Rd	0.00	0.14	0.14	6.70	P		U		F	962
971. Machakos Road	NCC 0971	Ent. Rd.	W/S. Rd.	0.00	0.68	0.68	6.00	P	D	U		F	963
972. Maendeleo Road	NCC 0972	Ham. Rd.	Ham. Rd.	0.00	1.06	1.06	4.30	P	A	U		F	964
973. Makadara Avenue	NCC 0973	Ham. Rd.	Ham. Rd.	0.00	0.48	0.48	4.80	P		U		F	965
974. Mariakani Gardens	NCC 0974	Mar. Rd.	End	0.00	0.27	0.27	5.60	P	C	U		F	966
975. Mariakani road	NCC 0975	Muk. Rd.	Gar. Rd.	0.00	0.05	0.05	5.60	P	A	U		F	967
976. Mazinga Road	NCC 0976	Sore. Rd.	End	0.00	0.36	0.36	4.60	P	C	U		F	968
977. Mchumbi Road	NCC 0977	Aoko. Rd.	Muk. Rd.	0.00	0.51	0.51	4.50	P	L	U		F	969
978. Mfumbiri Road	NCC 0978	Mwa. Rd.	P/V. Rd.	0.00	0.19	0.19	4.00	P		U		F	970
979. Migwani Road	NCC 0979	Ent. Rd.	Nyah. Rd.	0.00	0.63	0.63	7.50	P		U		F	971
980. Mkoma Road	NCC 0980	Muke. Rd.	Kapi. Rd.	0.00	0.42	0.42	6.60	P	D	U		F	972
981. Mogadishu Road	NCC 0981	L/L. Rd.	End	0.00	0.61	0.61	7.00	P	C	U		F	973
982. Mombasa Road (pt.2)	NCC 0982	Msa. Rd.	Nyayo Sta.	0.00	2.10	2.10	16.00	P	H	U	B	F	974
983. Mukandu Road	NCC 0983	Shi. Rd.	Muk. Rd.	0.00	0.33	0.33	5.00	P	A	U		F	975
984. Mukenia Road	NCC 0984	Dung. Rd.	Mch. Rd.	0.00	0.75	0.75	10.00	P	D	U		F	976
985. Mukiranjia Road	NCC 0985	Mako. Fe.	Njia Kuu	0.00	0.18	0.18	4.20	P	A	U		F	977
986. Mulunga Close	NCC 0986	Sore. Rd.	End	0.00	0.11	0.11	4.00	P	C	U		F	978
987. Mumbi Close	NCC 0987	Murm. Rd.	End	0.00	0.10	0.10	4.80	P	C	U		F	979
988. Mumbi Crescent	NCC 0988	Murm. Rd.	Lai. Rd.	0.00	0.15	0.15	5.00	P	A	U		F	980
989. Mumbi Lane	NCC 0989	Murm. Rd.	End	0.00	0.10	0.10	5.00	P	C	U		F	981
990. Mumbi Road	NCC 0990	Rabai Rd.	Laibon Rd.	0.00	0.35	0.35	6.50	P	A	U		F	982
991. Mumias South Road	NCC 0991	Murm. Rd.	Raba. Rd.	0.00	2.56	2.56	7.20	P	A	U		F	983
992. Musingu Close	NCC 0992	C/N. Rd.	End	0.00	0.22	0.22	4.50	P	C	U		F	983
993. Mutanda Road	NCC 0993	Rabai Rd.	Lase. Rd.	0.00	0.28	0.28	5.30	P		U		F	984
994. Mutoini Road	NCC 0994	Kivu. Rd.	Rui. Cfs.	0.00	0.27	0.27	5.00	P	A	U		F	985
995. Mwangeka Road	NCC 0995	Sore. Rd.	Sore. Rd.	0.00	0.56	0.56	6.40	P	A	U		F	986
996. Mwembere Road	NCC 0996	Uho. Rd.	Muk. Rd.	0.00	0.32	0.32	6.00	P	A	U		F	987
997. Nanyuki road	NCC 0997	L/L. Rd.	Moga. Rd.	0.00	2.31	2.31	6.50	P	D	U		F	988
998. Ndumbe Road	NCC 0998	D Rd.	End	0.00	0.36	0.36	6.50	P	C	U		F	989
999. Ngiri Road	NCC 0999	Jin. Rd.	Njiw. Rd.	0.00	1.18	1.18	4.25	P	L	U		F	990
"	NCC 0999	Jin. Rd.	Njiw. Rd.	1.18	1.34	0.16	4.25	U(E)	L	U	B	F	990
1000. Nile Road	NCC 1000	Jog. Rd.	B/B. Rd.	0.00	1.32	1.32	7.20	P	P	U		F	991

TABLE 4.3-4 (8) ROAD INVENTORY IN MAKADARA

ROAD INVENTORY AREA: Nairobi ZONE: Makadara GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1001. Nija Kuu Road	NCC 1001	Kal. Rd.	Loop. Rd.	0.00	0.65	0.65	4.30	P	A	U		F	992
1002. Nijwa Road	NCC 1002	Lik. Fen.	Ngi. Rd.	0.00	0.83	0.83	4.70	P	L	U		F	993
"	NCC 1002	Lik. Fen.	Ngi. Rd.	0.83	1.12	0.29	4.70	U(E)	L	U	B	F	993
1003. Nyahera Road	NCC 1003	L/L. Rd.	End	0.00	0.29	0.29	7.00	P	C	U		F	994
1004. Nziu Road	NCC 1004	Mum. Rd.	M/S. Rd.	0.00	0.50	0.50	5.30	P	A	U		F	995
1005. Ol Donyo Lengai Rd.	NCC 1005	M/S. Rd.	M/S. Rd.	0.00	0.60	0.60	6.80	P	A	U		F	996
1006. Ol Donyo Sabuk Rd.	NCC 1006	M/S. Rd.	M/S. Rd.	0.00	0.67	0.67	6.90	P	A	U		F	997
1007. Ol Kalou Road	NCC 1007	Nan. Rd.	End	0.00	0.47	0.47	7.50	P	C	U		F	998
1008. Pate Road	NCC 1008	L/L. Rd.	End	0.00	0.49	0.49	7.00	P	C	U		F	999
1009. Plains View Road	NCC 1009	Sore. Rd.	Uwa. Rd.	0.00	0.67	0.67	6.00	P	L	U		F	1000
1010. Rabai Road	NCC 1010	Jog. Rd.	M/S. Rd.	0.00	1.70	1.70	7.10	P	D	U		F	1001
1011. Rangwe Close	NCC 1011	Ser. Rd.	End	0.00	0.13	0.13	7.50	P	C	U		F	1002
1012. Rangwe Road	NCC 1012	L/L. Rd.	Ser. Rd.	0.00	0.15	0.15	7.50	P	C	U		F	1003
1013. Rev. Symekha Road	NCC 1013	Katu. Rd.	End	0.00	0.47	0.47	5.30	P	C	U		F	1004
1014. Ruiruaka Crescent	NCC 1014	Uaso Rd.	Uaso. Rd.	0.00	1.69	1.69	4.80	P	A	U		F	1005
1015. Rukwa Road	NCC 1015	Rui. Crs.	Rui. Crs.	0.00	0.62	0.62	6.50	P	A	U		F	1006
1016. Sadi Road	NCC 1016	Kapi Rd.	Kapi. Rd.	0.00	0.30	0.30	4.50	P	A	U		F	1007
1017. Salim Ali Bin Salim Rd.	NCC 1017	Sta. Rd.	Nija Kuu	0.00	0.27	0.27	4.00	P	A	U		F	1008
1018. Sasio Road (pt.1)	NCC 1018	Ser. Rd.	L/L. Rd.	0.00	0.26	0.26	7.00	P	D	U		F	1009
1019. Sasio Road (pt.2)	NCC 1019	P/L. Dep.	L/L. Rd.	0.26	1.08	0.82	7.50	P	D	U		F	1010
1020. Seme Road	NCC 1020	Ham. Rd.	Ham. Rd.	0.00	0.63	0.63	4.70	P	A	U		F	1011
1021. Serem Close	NCC 1021	L/L. Rd.	Sas. Rd.	0.00	0.19	0.19	7.50	P	L	U		F	1012
1022. Serem Road	NCC 1022	L/L. Rd.	Sas. Rd.	0.00	0.88	0.88	7.50	P	L	U		F	1013
1023. Shikunga Road	NCC 1023	Muk. Rd.	Mak. Rd.	0.00	0.32	0.32	5.00	P	A	U		F	1014
1024. Shule Close	NCC 1024	C/N Rd.	End	0.00	0.22	0.22	4.70	P	C	U		F	1015
1025. Shule Road	NCC 1025	Raba. Rd.	Nya. Rd.	0.00	0.76	0.76	6.80	P	A	U		F	1016
1026. Sore Drive	NCC 1026	Sore. Ln.	Mazi. Rd.	0.00	0.38	0.38	5.00	P		U		F	1017
1027. Sore Lane	NCC 1027	Maz. Rd.	Msa. Rd.	0.00	0.06	0.06	5.00	P		U		F	1018
1028. Sore Road	NCC 1028	Msa. Rd.	Kapi. Rd.	0.00	0.71	0.71	6.65	P	D	U		F	1019
1029. Sotik Road	NCC 1029	Bun. Rd.	Hola. Rd.	0.00	0.17	0.17	6.00	U(G)		U	B	F	1020
1030. Stadium Road	NCC 1030	Jog. Rd.	End	0.00	0.90	0.90	6.00	P	C	U		F	1021
1031. Tana Crescent	NCC 1031	B/B. Rd.	B/B. Rd.	0.00	0.40	0.40	5.30	P	A	U		F	1022
1032. Tinda Close	NCC 1032	C/New Rd	End	0.00	0.15	0.15	4.80	P	C	U		F	1023



TABLE 4.3-4 (9) ROAD INVENTORY IN MATHARE

GIBB AFRICA

ZONE: Mathare

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet No.
		Start (from)	End (to)	Start (from)	End (to)								
1044. Brewery Rd. A	NCC 1044	O/R Rd.	Rd. B	0.00	0.25	0.25	6.00	P	A	U		B	1035
1045. Brewery Rd. B	NCC 1045	Thika Rd	Henkel	0.00	0.47	0.47	6.80	P	A	U		B	1036
1046. Brewery Rd. D	NCC 1046	Rd. C	B/G. Rd.	0.00	0.61	0.61	4.00	U(E)	A	U		B	1037
1047. Brewery Rd. C	NCC 1047	Rd. B	End	0.00	0.14	0.14	6.40	P	C	U		B	1038
1048. Drive-In Rd. 1	NCC 1048	Rd. 3	Rd. 2	0.00	0.20	0.20	5.10	P	A	U		F	1039
1049. Drive-In Rd. 10	NCC 1049	Rd. 7	Rd. 6	0.00	0.11	0.11	5.10	P	A	U		B	1040
1050. Drive-In Rd. 11	NCC 1050	Rd. 8	Rd. 2	0.00	0.47	0.47	5.10	P	L	U		F	1041
1051. Drive-In Rd. 1B	NCC 1051	Rd. B	End	0.00	0.26	0.26	5.10	P	C	U		B	1042
1052. Drive-In Rd. 2	NCC 1052	Rd. 1	Rd. 11	0.00	0.12	0.12	5.10	P	A	U		B	1043
1053. Drive-In Rd. 3	NCC 1053	Rd. 2	Rd. 11	0.00	0.12	0.12	5.10	P	A	U		F	1044
1054. Drive-In Rd. 4	NCC 1054	Rd. 11	Rd. 5	0.00	0.10	0.10	5.10	P	A	U		F	1045
1055. Drive-In Rd. 5	NCC 1055	Rd. 4	End	0.00	0.08	0.08	5.10	P	C	U		B	1046
1056. Drive-In Rd. 6	NCC 1056	Rd. 11	Rd. 10	0.00	0.07	0.07	5.10	P	A	U		F	1047
1057. Drive-In Rd. 7	NCC 1057	Rd. 2	Rd. 11	0.00	0.13	0.13	5.10	P	A	U		F	1048
1058. Drive-In Rd. 8	NCC 1058	Rd. 9	Rd. 11	0.00	0.10	0.10	5.10	P	A	U		B	1049
1059. Drive-In Rd. 9	NCC 1059	Rd. 7	Rd. 8	0.00	0.08	0.08	5.10	P	A	U		F	1050
1060. Drive-In Rd. A	NCC 1060	Rd. 1	End	0.00	0.51	0.51	5.10	U(E)	C	U		F	1051
1061. Drive-In Rd. B	NCC 1061	Rd. A	Rd. C	0.00	1.00	1.00	6.35	P	L	U		F	1052
1062. Drive-In Rd. C	NCC 1062	Rd. B	Rd. D	0.00	0.22	0.22	6.00	P	A	U		B	1053
1063. Drive-In Rd. D	NCC 1063	Rd. C	End	0.00	0.25	0.25	6.10	P	C	U	B	B	1054
1064. Drive-In Rd. 4A	NCC 1064	Rd. 4B	End	0.00	0.11	0.11	5.10	P	C	U	B	B	1055
1065. Drive-In Rd. 4B	NCC 1065	Rd. 4A	Rd. 4E	0.00	0.15	0.15	5.10	P	A	U		B	1056
1066. Drive-In Rd. 4C	NCC 1066	Rd. 4B	Rd. 4D	0.00	0.08	0.08	5.10	P	A	U		B	1057
1067. Drive-In Rd. 4D	NCC 1067	Rd. 4C	Rd. 4E	0.00	0.14	0.14	5.10	P	A	U		B	1058
1068. Drive-In Rd. 4E	NCC 1068	Rd. 4D	Rd. 4B	0.00	0.12	0.12	5.10	P	A	U		B	1059
1069. Drive-In Rd. 5B	NCC 1069	Rd. 4	End	0.00	0.12	0.12	5.10	P	C	U		B	1060
1070. Drive-In Rd. Z	NCC 1070	Rd. 4	Rd. 4A	0.00	0.05	0.05	5.10	P	A	U		B	1061
1071. Garden Est. Rd. C	NCC 1071	Rd. C	End	0.00	1.22	1.22	5.00	U(E)	C	U		B	1062
1072. Garden Est. Rd. D	NCC 1072	G/E. Rd.	End	0.00	0.25	0.25	4.90	P	C	U		B	1063
1073. Garden Est. Rd. E	NCC 1073	G/E. Rd.	End	0.00	0.29	0.29	5.00	U(G)	C	U		B	1064
1074. Garden Est. Rd. F	NCC 1074	G/E. Rd.	End	0.00	0.18	0.18	5.00	P	C	U		B	1065
1075. Garden Est. Rd. G	NCC 1075	G/E. Rd.	R/W. Rd.	0.00	1.35	1.35	5.00	U(E)	C	U		B	1066
1076. Garden Est. Rd. H	NCC 1076	G/E. Rd.	Maru. Rd	0.00	0.25	0.25	5.00	U(E)	C	U		B	1067

TABLE 4.3-4 (9) ROAD INVENTORY IN MATHARE

GIBB AFRICA

ZONE: Mathare

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1077. Githurai E. Rd. G	NCC 1077	N/T Rd.	Kam. Rd	0.00	0.10	0.10	6.40	P	A	U		B	1068
"	NCC 1077	N/T Rd.	Kam. Rd	0.10	0.73	0.63	6.40	U(G)	A	U		B	1068
1078. Githurai E. Rd. H	NCC 1077	N/T Rd.	Kam. Rd	0.73	1.64	0.91	6.40	U(E)	A	U		B	1068
1079. Githurai E. Rd. I	NCC 1078	G. Rd	End	0.00	0.21	0.21	3.50	U(E)	C	U		B	1069
1079. Githurai E. Rd. I	NCC 1079	G. Rd	End	0.00	0.33	0.33	3.30	U(E)	C	U		B	1070
1080. Githurai E. Rd. J	NCC 1080	G. Rd	End	0.00	0.45	0.45	3.50	U(E)	C	U		B	1071
1081. Githurai E. Rd. K	NCC 1081	G. Rd	End	0.00	0.51	0.51	3.50	U(E)	C	U		B	1072
1082. Githurai W. Rd. A1	NCC 1082	Kam. Rd	Gith. Sch.	0.00	1.14	1.14	4.90	U(E)	U	U		B	1073
1083. Githurai W. Rd. A2	NCC 1083	Gith. Sch.	Kam. Rd	0.00	1.14	1.14	4.90	U(E)	U	U		B	1074
1084. Githurai W. Rd. A3	NCC 1084	Kam. Rd	Gith. Sch.	0.00	1.14	1.14	4.90	U(E)	U	U		B	1075
1085. Githurai W. Rd. A4	NCC 1085	Gith. Sch.	Kam. Rd	0.00	1.14	1.14	4.90	U(E)	U	U		B	1076
1086. Githurai W. Rd. A5	NCC 1086	Kam. Rd	Gith. Sch.	0.00	1.14	1.14	4.90	U(E)	U	U		B	1077
1087. Githurai W. Rd. A6	NCC 1087	Kam. Rd	Gith. Sch.	0.00	1.14	1.14	4.90	U(E)	U	U		B	1078
1088. Githurai W. Rd. A7	NCC 1088	Gith. Mkt.	Kam. Rd	0.00	1.14	1.14	4.90	U(E)	C	U		B	1079
1089. Githurai W. Rd. B1	NCC 1089	Kam. Rd	Gith. Shps	0.00	0.23	0.23	3.30	P	A	U		B	1080
"	NCC 1089	Kam. Rd	Gith. Shps	0.23	1.87	1.64	3.30	U(E)	A	U		B	1080
1090. Githurai W. Rd. B2	NCC 1090	Kam. Rd	F. Rd	0.00	1.32	1.32	3.50	U(E)	A	U		B	1081
1091. Githurai W. Rd. C	NCC 1091	B2 Rd	C. Rd	0.00	0.33	0.33	3.50	U(E)	U	U		B	1082
1092. Githurai W. Rd. D	NCC 1092	D. Rd	B1. Rd	0.00	0.28	0.28	3.60	U(E)	U	U		B	1083
1093. Githurai W. Rd. E	NCC 1093	B1. Rd	End	0.00	0.29	0.29	4.00	U(E)	C	U		B	1084
1094. Githurai W. Rd. F	NCC 1094	B1. Rd	End	0.00	0.28	0.28	4.30	U(E)	C	U		B	1085
1095. Grdn. Est. Rd.A (pt.2)	NCC 1095	R/W. Rd	End	0.00	0.65	0.65	4.00	P	C	U		B	1086A
1096. Grdn. Est. Rd.B (pt.2)	NCC 1096	R/W. Rd	End	0.00	0.23	0.23	5.40	P	C	U		B	1086B
1097. Grdn. Est. Rd.A (pt.1)	NCC 1097	R/W. Rd	End	0.00	0.26	0.26	4.00	P	C	U		B	1087
1098. Grdn. Est. Rd.B (pt.1)	NCC 1098	R/W. Rd	End	0.00	0.16	0.16	3.30	P	C	U	M	B	1088
1099. Huruma Est. Rd. A	NCC 1099	N/R. Rd	O/M. Rd	0.00	0.53	0.53	3.50	P	A	U		B	1089
1100. Huruma Est. Rd. B	NCC 1100	Math. Rd	Juja Rd	0.00	0.94	0.94	9.00	P	A	U		B	1090
1101. Huruma Est. Rd. C	NCC 1101	Rd. B	End	0.00	0.23	0.23	5.30	P	C	U		B	1091
1102. Huruma Est. Rd. D	NCC 1102	Rd. B	End	0.00	0.16	0.16	5.40	P	C	U		B	1092
1103. Huruma Est. Rd. D1	NCC 1103	Rd. C	Rd. D	0.00	0.13	0.13	6.10	P	A	U		B	1093
1104. Huruma Est. Rd. E	NCC 1104	Rd. B	End	0.00	0.10	0.10	5.50	P	C	U		B	1094
1105. Huruma Est. Rd. F	NCC 1105	Rd. B	Rd. X	0.00	0.30	0.30	5.20	P	L	U		B	1095

TABLE 4.3-4 (9) ROAD INVENTORY IN MATHARE

GIBB AFRICA

ZONE: Mathare

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1106. Huruma Est. Rd. F1	NCC 1106	Rd. F	Math. Rd	0.00	0.63	0.63	5.60	P	A	U		B	1096
1107. Huruma Est. Rd. G	NCC 1107	Rd. B	End	0.00	0.09	0.09	5.70	P	C	U		B	1097
1108. Huruma Est. Rd. K	NCC 1108	Rd. B	End	0.00	0.10	0.10	5.70	P	C	U		B	1098
1109. Huruma Rd. 2	NCC 1109	Math. Rd	Rd. 3	0.00	0.12	0.12	5.80	P	A	U		B	1099
1110. Huruma Rd. 3	NCC 1110	Rd. 2	Rd. Y	0.00	1.00	1.00	5.80	P	L	U		B	1100
1111. Huruma Rd. A1	NCC 1111	Hur. Rd	End	0.00	0.33	0.33	5.80	P	C	U		B	1101
1112. Huruma Rd. A2	NCC 1112	Rd. A1	End	0.00	0.25	0.25	5.80	P	C	U		B	1102
"	NCC 1112	Rd. A1	End	0.25	0.34	0.09	5.80	U(E)	C	U		B	1102
1113. Huruma Rd. A3	NCC 1113	Rd. A1	End	0.00	0.50	0.50	5.80	P	C	U		B	1103
1114. Huruma Rd. A4	NCC 1114	Rd. A	N/R. Rd	0.00	0.23	0.23	5.80	P	A	U		B	1104
"	NCC 1114	Rd. A	N/R. Rd	0.23	0.33	0.10	5.80	U(E)	A	U		B	1104
1115. Huruma Rd. A5	NCC 1115	Rd. A4	End	0.00	0.19	0.19	5.80	P	C	U	M	B	1105
1116. Huruma Rd. A6	NCC 1116	Rd. A4	End			0.17	5.80	P	C	U	M	B	1106
1117. Huruma Rd. X	NCC 1117	Rd. Y	O/R. Rd	0.00	0.99	0.99	5.90	P	A	U	M	B	1107
"	NCC 1117	Rd. Y	O/R. Rd	0.99	1.14	0.15	5.90	U(E)	A	U		B	1107
1118. Huruma Rd. Z	NCC 1118	Hur. Rd	Rd. X	0.00	0.21	0.21	5.90	P	A	U		B	1108
1119. Huruma Rd. Z1	NCC 1119	Hur. Rd	Rd. X	0.00	0.21	0.21	5.90	P	A	U		B	1109
1120. Jua Kali Est. Rd D	NCC 1120	Rd. A	End	0.00	0.15	0.15	3.00	U(G)	C	U		B	1110
1121. Kahawa W. Rd. B	NCC 1121	Kah/W. Rd	D. Est.	0.00	0.23	0.23	6.10	P	A	U		B	1111
1122. Kahawa W. Rd. B1	NCC 1122	Rd. B1	End	0.00	0.36	0.36	5.60	P	C	U		B	1112
1123. Kahawa W. Rd. B2	NCC 1123	Rd. B1	End	0.00	0.14	0.14	5.10	P	C	U		B	1113
1124. Kahawa W. Rd. C	NCC 1124	Kah/W. Rd	End	0.00	0.60	0.60	5.10	U(E)	C	U		B	1114
1125. Kahawa W. Rd. D	NCC 1125	Rd. A	Rd. B	0.00	0.80	0.80	5.10	P	A	U		B	1115
1126. Kahawa W. Rd. A	NCC 1126	Kah/W. Rd	Rd. D	0.00	0.27	0.27	6.10	P	A	U	M	B	1116
1127. Kariobangi N. Rd.A	NCC 1127	Kam. Rd	Rd. P	0.00	0.16	0.16		P	A	U		B	1117
1128. Kariobangi N. Rd.B	NCC 1128	Kam. Rd	Rd. E	0.00	0.15	0.15	2.20	P	A	U		B	1118
1129. Kariobangi N. Rd.C	NCC 1129	Kam. Rd	Rd. E	0.00	0.15	0.15	2.80	P	A	U		B	1119
1130. Kariobangi N. Rd.D	NCC 1130	Rd. A	Rd. F	0.00	0.12	0.12	3.50	P	A	U		B	1120
1131. Kariobangi N. Rd.E	NCC 1131	Rd. A	Rd. F	0.00	0.13	0.13	3.20	P	A	U		B	1121
1132. Kariobangi N. Rd.F	NCC 1132	Rd. E	Rd. A	0.00	0.47	0.47	3.90	P	A	U		B	1122
1133. Kariobangi N. Rd.G	NCC 1133	Rd. F	Rd. L	0.00	0.12	0.12	3.70	P	A	U		B	1123
1134. Kariobangi N. Rd.H	NCC 1134	Rd. F	Rd. L	0.00	0.12	0.12	3.20	P	A	U		B	1124
1135. Kariobangi N. Rd.K	NCC 1135	Rd. A	Rd. F	0.00	0.12	0.12	3.60	P	A	U	B	B	1125

TABLE 4.3-4 (9) ROAD INVENTORY IN MATHARE

GIBB AFRICA

ZONE: Mathare

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1136. Kariobangi N. Rd.L	NCC 1136	Rd. A	Rd. F	0.00	0.12	0.12	3.40	P	A	U		B	1126
1137. Kariobangi N. Rd.M	NCC 1137	Rd. A	Rd. F	0.00	0.12	0.12	2.70	P	A	U		B	1127
1138. Kariobangi N. Rd.P	NCC 1138	O/R. Rd	A/C	0.00	0.66	0.66	3.50	U(E)	A	U	M	B	1128
1139. Kariobangi N. Rd.Q	NCC 1139	Rd. A	End	0.00	0.14	0.14	3.50	U(E)	C	U		B	1129
1140. Kariobangi N. Rd.R	NCC 1140	Kam. Rd	End	0.00	0.17	0.17	3.50	U(E)	C	U		B	1130
1141. Kariobangi N. Rd.S	NCC 1141	Rd. R	End	0.00	0.11	0.11	3.50	U(E)	C	U		B	1131
1142. Kariobangi N. Rd.T	NCC 1142	Kam. Rd	O/R. Rd	0.00	0.65	0.65	3.50	U(E)	A	U		B	1132
1143. Kasarani Std. Rd. A	NCC 1143	Kasa. Rd	Rd. B	0.00	0.34	0.34	5.40	P	D	U		B	1133
1144. Kasarani Std. Rd. B	NCC 1144	Kas/Gate	Kasa. Rd	0.00	4.72	4.72	9.00	P		U		B	1134
1145. Kasarani Std. Rd. C	NCC 1145	Kasa. Rd	Kasa. Rd	0.00	0.24	0.24	5.40	P		U		B	1135
1146. Kasarani Std. Rd. D	NCC 1146	Njiru Rd	Thika Rd	0.00	4.05	4.05	9.00	P		U		B	1136
1147. Korogocho Rd. A	NCC 1147	B Rd.	D Rd	0.00	0.58	0.58	4.00	U(E)		U		B	1137
1148. Korogocho Rd. B	NCC 1148	C Rd.	End	0.00	0.23	0.23	4.00	U(E)	C	U		B	1138
1149. Korogocho Rd. D	NCC 1149	Koma Rd.	H Rd.	0.00	1.52	1.52	4.00	U(E)		U		B	1139
1150. Korogocho Rd. E	NCC 1150	Math. Rd	C. Rd	0.00	0.28	0.28	4.00	U(E)		U		B	1140
1151. Korogocho Rd. F	NCC 1151	O Rd	K. Rd	0.00	0.28	0.28	4.00	U(E)		U		B	1141
1152. Korogocho Rd. G	NCC 1152	C Rd.	D Rd	0.00	0.21	0.21	4.00	U(E)		U		B	1142
1153. Korogocho Rd. H	NCC 1153	C Rd.	End	0.00	0.19	0.19	4.00	U(E)	C	U		B	1143
1154. Korogocho Rd. J	NCC 1154	C Rd.	End	0.00	0.20	0.20	4.00	U(E)	C	U		B	1144
1155. Korogocho Rd. K	NCC 1155	C Rd.	End	0.00	0.20	0.20	4.00	U(E)	C	U		B	1145
1156. Korogocho Rd. L	NCC 1156	C Rd.	End	0.00	0.23	0.23	4.00	U(E)	C	U		B	1146
1157. Korogocho Rd. M	NCC 1157	C Rd.	End	0.00	0.27	0.27	4.00	U(E)	C	U		B	1147
1158. Korogocho Rd. N	NCC 1158	C Rd.	End	0.00	0.36	0.36	4.00	U(E)	C	U		B	1148
1159. Korogocho Rd. O	NCC 1159	C Rd.	End	0.00	0.24	0.24	4.00	U(E)	C	U		B	1149
1160. Korogocho Rd. P	NCC 1160	C Rd.	End	0.00	0.29	0.29	4.00	U(E)	C	U		B	1150
1161. Korogocho Rd. Q	NCC 1161	D Rd	End	0.00	0.10	0.10	4.00	U(E)	C	U		B	1151
1162. Korogocho Rd. R	NCC 1162	K/L. Rd.	End	0.00	0.20	0.20	4.00	U(E)	C	U		B	1152
1163. Korogocho Rd. S	NCC 1163	C Rd.	End	0.00	0.28	0.28	4.00	U(E)	C	U		B	1153
1164. Krbngi. N. Rd. A1	NCC 1164	O/R. Rd	O/R. Rd	0.00	0.46	0.46	3.20	U(E)		U		B	1154
1165. Krbngi. N. Rd. A2	NCC 1165	O/R. Rd	O/R. Rd	0.00	0.16	0.16	3.20	P		U		B	1155
1166. Mathare N. Rd. H	NCC 1166	Rd. B	Rd. X	0.00	0.31	0.31	5.40	P	A	U		B	1156
1167. Mathare N. Rd. H1	NCC 1167	Rd. H	End	0.00	0.19	0.19	5.30	P	C	U		B	1157
1168. Mathare N. Rd. Y	NCC 1168	Thika Rd	Juja Rd	0.00	2.05	2.05	7.32	P	A	U	M	B	1158



TABLE 4.3-4 (9) ROAD INVENTORY IN MATHARE

GIBB AFRICA

ZONE: Mathare

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1169. Mathare N. Rd. Y1	NCC 1169	Rd. Y	Rd. Y2	0.00	0.80	0.80	5.50	U(E)	D	U		B	1159
1170. Mathare N. Rd. Y2	NCC 1170	Math. Rd	Rd. Y1	0.00	0.14	0.14	4.00	U(E)	D	U		B	1160
1171. Mathare N. Rd. Y3	NCC 1171	Rd. Y2	End (R)	0.00	0.30	0.30	4.00	U(E)	C	U		B	1161
1172. Njiru Sch. - Kasmi Rd	NCC 1172	Kang. Rd	Kasa. Rd	0.00	1.49	1.49	6.00	P	A	U		B	1162
"	NCC 1172	Kang. Rd	Kasa. Rd	1.49	5.63	4.14	6.00	U(E)	A	U		B	1162
1173. Ruaraka Rd. 1	NCC 1173	B/D. Rd	Rd. 2	0.00	0.39	0.39	4.00	U(E)		U		B	1163
1174. Ruaraka Rd. 2	NCC 1174	Rd. 1A	Rd. 4	0.00	0.73	0.73	4.00	U(E)		U		B	1164
1175. Ruaraka Rd. 3	NCC 1175	B/D. Rd	Rd. 3A	0.00	0.39	0.39	4.00	U(E)		U		B	1165
1176. Ruaraka Rd. 3A	NCC 1176	B/D. Rd	End	0.00	0.33	0.33	4.00	U(E)	C	U		B	1166
1177. Ruaraka Rd. 3B	NCC 1177	Rd. 3	B/D. Rd	0.00	0.38	0.38	4.00	U(G)		U		B	1167
"	NCC 1177	Rd. 3	B/D. Rd	0.38	0.88	0.50	4.00	U(E)		U		B	1167
1178. Ruaraka Rd. 4	NCC 1178	Rd. 2	End	0.00	0.63	0.63	4.00	U(G)	C	U		B	1168
1179. Ruaraka Rd. 4A	NCC 1179	B/D. Rd	End	0.00	0.39	0.39	4.00	U(E)	C	U		B	1169
1180. Ruaraka Rd. 7	NCC 1180	Rd. 5	End	0.00	0.20	0.20	4.00	U(E)	C	U		B	1170
1181. Ruaraka Rd. 8	NCC 1181	Rd. 5	B/D. Rd	0.00	0.28	0.28	4.00	U(E)		U		B	1171
1182. Ruaraka Rd. 9	NCC 1182	Rd. 5	End	0.00	0.35	0.35	4.00	U(E)	C	U		B	1172
1183. Ruaraka Rd. 2A	NCC 1183	Rd. 2	End	0.00	0.20	0.20	4.00	U(E)	C	U		B	1173
1184. Ruaraka Rd. 5	NCC 1184	Hen. Fe	End	0.00	0.18	0.18	7.10	P	C	U		B	1174
1185. Ruaraka Rd. 6	NCC 1185	Rd. 5	End	0.00	0.28	0.28	4.00	U(E)	C	U		B	1175
1186. Safari P. Hotel Rd.E	NCC 1186	Mure. Rd	End	0.00	0.20	0.20	4.30	U(G)	C	U		B	1176
1187. Safari P. Hotel Rd.Y	NCC 1187	H/V. Sch.	N/T. Rd	0.00	0.30	0.30	5.30	P	A	U		B	1177
"	NCC 1187	H/V. Sch.	N/T. Rd	0.30	1.40	1.10	5.30	U(E)	A	U		B	1177
1188. Zimmerman Rd B1-B2	NCC 1188	Kami. Rd	C1/C2. Rd	0.00	0.15	0.15	4.30	U(G)	A	U		B	1178
1189. Zimm. Rd. Z1-E2-Z2	NCC 1189	Kami. Rd	Z2. Rd	0.00	0.52	0.52	4.30	U(G)	A	U		B	1179
1190. Zimm. Rd. Y-X	NCC 1190	Kami. Rd	X Rd	0.00	0.33	0.33	4.30	U(G)	A	U		B	1180
"	NCC 1190	Kami. Rd		0.00	0.33	0.34	4.30	U(E)	A	U		B	1180
1191. Zimm. Rd. C1-C2	NCC 1191	Kami. Rd	C2 Rd	0.00	0.72	0.72	4.30	U(G)	A	U		B	1181
1192. Zimm. Rd. D1-D2	NCC 1192	Kami. Rd	D2. Rd	0.00	0.74	0.74	4.30	U(E)	A	U		B	1182
1193. Zimm. Rd. E1-E2	NCC 1193	Roy. Sch.	E1 Rd	0.00	0.46	0.46	4.00	U(E)	A	U		B	1183
1194. Zimm. Rd. F1-F2	NCC 1194	K/Rv. F1	F2 Rd	0.00	0.46	0.46	4.00	U(E)	A	U		B	1184
1195. Zimm. Rd. F3-F4	NCC 1195	P1-P2. Rd	F4 Rd	0.00	0.11	0.11	4.00	U(E)	A	U		B	1185
1196. Zimm. Rd. G1-G2	NCC 1196	Kam/Rv.	G4 Rd	0.00	0.44	0.44	3.50	U(E)	A	U		B	1186
1197. Zimm. Rd. P1-P2	NCC 1197	P1 Rd	P2 Rd	0.00	0.21	0.21	3.50	U(E)	A	U		B	1187

TABLE 4.3-4 (9) ROAD INVENTORY IN MATHARE

GIBB AFRICA

ZONE: Mathare

AREA: Nairobi

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1198. Zimrmn. Rd. P1-Q1	NCC 1198	Q1. Rd	P1. Rd	0.00	0.13	0.13	4.00	U(E)	A	U		B	1188
1199. Zimrmn. Rd. Q1-Q2	NCC 1199	Q1. Rd	Q2. Rd	0.00	0.27	0.27	4.30	U(E)	A	U		B	1189
1200. Zimrmn. Rd. W1-W2	NCC 1200	Kami. Rd	W2. Rd	0.00	0.32	0.32	3.00	U(E)	A	U		B	1190
1201. Baba Dogo Rd. pt.1	NCC 1201	O/R. Rd	End	0.00	0.32	0.32	6.00	U(G)	C	U		B	1191
"	NCC 1201	O/R. Rd	End	0.32	1.02	0.70	6.00	U(E)	C	U		B	1191
1202. Baba Dogo Rd. pt.2	NCC 1202	End	Kasa. Rd	0.00	1.70	1.70	6.00	P	A	U		B	1192
"	NCC 1202	End	Kasa. Rd	1.70	2.01	0.31	6.00	U(E)	A	U		B	1192
1203. Garden Est. Rd	NCC 1203	Kiri. Rd	Thika Rd	0.00	4.06	4.06	5.40	P	D	U	M	B	1193
1204. Halai Est. Lane	NCC 1204	R/Way. Rd	End	0.00	0.35	0.35	5.50	P	C	U		B	1194
1205. Huruma Road	NCC 1205	Math. Rd	O/R. Rd	0.00	0.55	0.55	7.05	P	A	U		B	1195
1206. Kahawa W. Road	NCC 1206	Kami. Rd	R/Sta.	0.00	1.87	1.87	6.80	P	L	U	B	B	1196
"	NCC 1206	Kami. Rd	R/Sta.	1.87	1.96	0.09	6.80	U(E)	L	U	B	B	1196
1207. Kamiti Road	NCC 1207	Thika Rd	Nbi/Kbu B	0.00	6.03	6.03	6.20	P	L	U	B	B	1197
1208. Kamunde Road	NCC 1208	O/R. Rd	O/R. Rd	0.00	1.72	1.72	7.20	P	A	U	B	B	1198
1209. Kasarani Road	NCC 1209	Nji. Rd	Thika Rd	0.00	2.25	2.25	10.10	P	L	U	M	B	1199
1210. Kirigwa Close	NCC 1210	Kiri. Rd	End	0.00	0.31	0.31	4.00	U(E)	C	U		B	1200
1211. Kirigwa Lane	NCC 1211	R/Way. Rd	Kiri. Rd	0.00	0.38	0.38	5.80	P	A	U		B	1201
1212. Kirigwa Rd. (pt.1)	NCC 1212	R/Way. Rd	B/B Sch.	0.00	1.25	1.25	5.00	P	L	U		B	1202
1213. Kirigwa Rd. (pt.2)	NCC 1213	B/B Sch.	W. Hotel	0.00	1.25	1.25	6.33	P	A	U		B	1203
1214. Lumumba Drive	NCC 1214	Kami. Rd	Mure. Rd	0.00	1.10	1.10	5.30	P	A	U		B	1204
1215. Maruri Road	NCC 1215	G/E. Rd	End	0.00	1.65	1.65	4.10	P	C	U		B	1205
1216. Mathare Road	NCC 1216	Juja Rd	End	0.00	1.28	1.28	7.30	P	C	U	M	B	1206
1217. Murema Dr. (pt.1)	NCC 1217	Kami. Rd	Mure. Rd	0.00	1.10	1.10	6.00	P		U		B	1207
1218. Murema Dr. (pt.2)	NCC 1218	Mure. Rd	JuaKali Rd	0.00	0.99	0.99	6.00	U(E)	A	U		B	1208
1219. Murema Road	NCC 1219	Rd. A	Rd. Y	0.00	1.23	1.23	5.30	P	A	U		B	1209
1220. Njathaini Road	NCC 1220	Kbu. Bor.	Kami. Rd	0.00	3.02	3.02	8.40	U(G)	D	U		B	1210
1221. Out. Ring Rd. (pt.1)	NCC 1221	Thika Rd	Kamu. Rd	0.00	1.71	1.71	7.10	P	P	U	B	B	1211
1222. Out. Ring Rd. (pt.2)	NCC 1222	Kamu. Rd	J/K R/A	0.00	1.10	1.10	7.00	P	P	U	B	B	1212
1223. Ridgeway Lane	NCC 1223	R/Way. Rd	End	0.00	0.33	0.33	4.00	U(E)	C	U		B	1213
1224. Ridgeway Road	NCC 1224	Kbu. Rd	Kiri. Rd	0.00	2.23	2.23	5.00	P	L	U	M	B	1214
1225. Thika Road	NCC 1225	M/R-about	Ruara	0.00	15.30	15.30	7.30	P	H	U		B	1215

**TABLE 4.3-4 (10) ROAD INVENTORY IN NJIRU**

**GIBB AFRICA**

**AREA:** Nairobi

**ZONE:** Njiru

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1226. Dandora Est. Rd 31	NCC 1226	Rd. 31	Rock Rd	0.00	0.17	0.17	4.80	P	A	U		F	1227
1227. Dandora Est. Rd 32	NCC 1227	Rock Rd	End	0.00	0.28	0.28	5.00	P	C	U		B	1228
1228. Dandora Est. Rd 33	NCC 1228	Rd. 31	End	0.00	0.56	0.56	5.00	P	C	U		B	1229
1229. Dandora Est. Rd 34	NCC 1229	Rock Rd	End	0.00	0.24	0.24	5.00	P	C	U		F	1230
1230. Dandora Est. Rd 35	NCC 1230	Rock Rd	End	0.00	0.27	0.27	5.00	P	C	U		B	1231
1231. Dandora Est. Rd 36	NCC 1231	Rock Rd	End	0.00	0.33	0.33	5.00	P	C	U		F	1232
1232. Dandora Est. Rd 37	NCC 1232	Rock Rd	End	0.00	0.33	0.33	4.90	P	C	U		B	1233
1233. Dandora Est. Rd 38	NCC 1233	Rock Rd	End	0.00	0.28	0.28	4.90	P	C	U		B	1234
1234. Dandora Est. Rd 39	NCC 1234	Rock Rd	End	0.00	0.32	0.32	4.90	P	C	U		F	1235
1235. Dandora Est. Rd 40	NCC 1235	Rock Rd	Rock Rd	0.00	0.24	0.24	5.00	P	A	U		B	1236
1236. Dandora Ph1. Rd A	NCC 1236	J/M. Rd	Koma Rd	0.00	0.39	0.39	4.50	P	A	U		F	1237
1237. Dandora Ph1. Rd B	NCC 1236	J/M. Rd	Koma Rd	0.39	0.49	0.10	4.50	U(E)	A	U		B	1237
1238. Dandora Ph1. Rd C	NCC 1237	J/M. Rd	Koma Rd	0.00	0.26	0.26	5.00	P	A	U		F	1238
1239. Dandora Ph1. Rd D	NCC 1238	J/M. Rd	End	0.00	0.21	0.21	5.00	P	C	U		F	1239
1240. Dandora Ph1. Rd E	NCC 1239	Rd. B	End	0.00	0.38	0.38	4.00	P	C	U		F	1240
1241. Dandora Ph1. Rd F	NCC 1240	Rd. B	End	0.00	0.22	0.22	5.00	P	C	U		F	1241
1242. Dandora Ph1. Rd G	NCC 1241	J/M. Rd	Rd. J	0.00	0.19	0.19	5.00	P	A	U		F	1242
1243. Dandora Ph1. Rd H	NCC 1242	Rd. N	Rd. F	0.00	0.15	0.15	5.00	P	A	U		B	1243
1244. Dandora Ph1. Rd I	NCC 1243	Rd. H	End	0.00	0.21	0.21	5.00	P	C	U		B	1244
1245. Dandora Ph1. Rd J	NCC 1244	Rd. F	End	0.00	0.17	0.17	4.00	P	C	U		F	1245
1246. Dandora Ph1. Rd K	NCC 1245	Rd. F	End	0.00	0.15	0.15	5.00	P	C	U		F	1246
1247. Dandora Ph1. Rd L	NCC 1246	Rd. F	End	0.00	0.20	0.20	5.00	P	C	U		F	1247
1248. Dandora Ph1. Rd M	NCC 1247	Rd. H	End	0.00	0.30	0.30	5.00	P	C	U		F	1248
1249. Dandora Ph1. Rd N	NCC 1248	J/M. Rd	Rd. G	0.00	0.36	0.36	5.00	P	A	U		B	1249
1250. Dandora Ph5. Rd A	NCC 1249	J/O. Rd	End	0.00	0.12	0.12	5.00	U(E)	C	U		B	1250
1251. Dandora Ph5. Rd B	NCC 1250	J/O. Rd	End	0.00	0.66	0.66	5.00	P	C	U		F	1251
1252. Dandora Ph5. Rd C	NCC 1251	J/O. Rd	End	0.00	0.36	0.36	5.00	P	C	U		F	1252
1253. Dandora Ph5. Rd D	NCC 1252	J/O. Rd	End	0.00	0.24	0.24	5.00	P	C	U		F	1253
1254. Doonholm Es. Rd A	NCC 1253	Rd. P	End	0.00	0.84	0.84	4.50	P	C	U		F	1254
1255. Doonholm Es. Rd B	NCC 1254	Rd. A	End	0.00	0.12	0.12	4.50	P	C	U		F	1255
1256. Doonholm Es. Rd C	NCC 1255	Rd. A	End	0.00	0.12	0.12	4.40	P	C	U		F	1256
1257. Doonholm Es. Rd D	NCC 1256	Rd. A	End	0.00	0.12	0.12	4.80	P	C	U		B	1257
1258. Doonholm Es. Rd E	NCC 1257	Rd. A	End	0.00	0.24	0.24	4.50	P	C	U		F	1258

**TABLE 4.3-4 (10) ROAD INVENTORY IN NJIRU**

**GIBB AFRICA**

**AREA:** Nairobi

**ZONE:** Njiru

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1258. Doonholm Es. Rd F	NCC 1258	Rd. A	End	0.00	0.16	0.16	5.00	P	C	U		F	1259
1259. Doonholm Es. RdG	NCC 1259	Rd. A	Rd. R	0.00	0.19	0.19	4.50	P	A	U		B	1260
1260. Doonholm Es. RdH	NCC 1260	Rd. A	End	0.00	0.20	0.20	4.70	P	C	U		B	1261
1261. Doonholm Es. Rd I	NCC 1261	Rd. A	Rd. R	0.00	0.19	0.19	5.50	P	A	U		F	1262
1262. Doonholm Es. RdJ	NCC 1262	Rd. A	End	0.00	0.25	0.25	4.50	P	C	U		F	1263
1263. Doonholm Es. RdK	NCC 1263	Rd. R	End	0.00	0.56	0.56	4.50	P	C	U		B	1264
1264. Doonholm Es. RdL	NCC 1264	Rd. R	End	0.00	0.56	0.56	4.50	U(E)	C	U		F	1265
1265. Doonholm Es. RdM	NCC 1265	Rd. R	End	0.00	0.15	0.15	4.50	P	C	U		B	1266
1266. Doonholm Es. RdN	NCC 1266	Rd. R	End	0.00	0.16	0.16	4.20	P	C	U		B	1267
1267. Doonholm Es. RdO	NCC 1267	Rd. R	End	0.00	0.16	0.16	5.00	P	C	U		F	1268
1268. Doonholm Es. RdP	NCC 1268	O/R Rd.	End	0.00	1.81	1.81	7.50	P	C	U		F	1269
1269. Greenfield Rd. G	NCC 1269	Rd. 1	Rd. 1	0.00	0.38	0.38	6.00	P	C	U		F	1270
1270. Greenfield Rd. H	NCC 1270	Rd. G	Rd. I	0.00	0.10	0.10	4.00	U(E)		U		B	1271
1271. Greenfield Rd. I	NCC 1271	Rd. G	Rd. U	0.00	0.13	0.13	4.00	P		U		F	1272
1272. Greenfield Rd. J	NCC 1272	Rd. I	Rd. K	0.00	0.09	0.09	5.00	P		U		B	1273
1273. Greenfield Rd. K	NCC 1273	Rd. J	Rd. L/R	0.00	0.12	0.12	5.00	P		U		B	1274
1274. Kayole Est. Rd. A	NCC 1274	Koma. Rd	Rd. B	0.00	0.88	0.88	6.50	P		U		B	1275
"	NCC 1274	Koma. Rd	Rd. B	0.88	1.02	1.02	6.50	U(E)		U		B	1275
1275. Kayole Est. Rd. B	NCC 1275	Rd. A	Rd. D	0.00	2.81	2.81	5.50	P		U		B	1276
1276. Kayole Est. Rd. C	NCC 1276	Rd. D	Rd. D	0.00	0.64	0.64	5.50	P		U		B	1277
1277. Kayole Est. Rd. D	NCC 1277	Koma. Rd	Koma. Rd	0.00	0.57	0.57	6.00	P		U		B	1278
1278. Kayole Est. Rd. E	NCC 1278	Rd. D	Rd. F	0.00	0.19	0.19	5.00	P		U		B	1279
1279. Kayole Est. Rd. F	NCC 1279	Rd. D	End	0.00	0.65	0.65	5.00	P	C	U		F	1280
1280. Kayole Est. Rd. G	NCC 1280	Kay. Br.	Kan. Rd	0.00	0.88	0.88	6.00	U(E)		U		B	1281
1281. Kayole Est. Rd. H	NCC 1281	Rd. D	Rd. D	0.00	0.58	0.58	5.00	P		U		F	1282
1282. Kayole Est. Rd. I	NCC 1282	Rd. D	Rd. G	0.00	0.27	0.27	5.00	P		U		B	1283
"	NCC 1282	Rd. D	Rd. G	0.27	0.34	0.07	5.00	U(E)		U		B	1283
1283. Kayole Est. Rd. J	NCC 1283	Rd. D	End	0.00	0.25	0.25	4.50	P	C	U		F	1284
1284. Kayole Est. Rd. K	NCC 1284	Rd. D	Rv/Br	0.00	0.33	0.33	5.00	U(E)		U		F	1285
1285. Kayole Est. Rd. L	NCC 1285	Rd. D	Rd. K	0.00	0.33	0.33	5.00	P		U		F	1286
1286. Kayole Est. Rd. M	NCC 1286	Rd. B	Rd. D	0.00	0.57	0.57	5.00	P		U		F	1287
"	NCC 1287	Rd. D	Rd. F	0.00	0.21	0.21	5.00	P		U		F	1288
1288. Kayole Est. Rd. O	NCC 1288	Rd. B	Rd. B	0.00	0.19	0.19	5.00	P		U		F	1289

**TABLE 4.3-4 (10) ROAD INVENTORY IN NJIRU**

**GIBB AFRICA**

**AREA:** Nairobi

**ZONE:** Njiru

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1289. Kayole Est. Rd. P	NCC 1289	Rd. B		0.00	0.27	0.27	5.00	P		U		F	1290
1290. Kayole Est. Rd. Q	NCC 1290	Rd. B	Koma Rd	0.00	0.68	0.68	6.00	P		U		F	1291
1291. Kayole Est. Rd. R	NCC 1291	Rd. A	Rd. O	0.00	0.54	0.54	5.50	P		U		B	1292
1292. Kayole Est. Rd. S	NCC 1292	Rd. B	Rd. B	0.00	0.65	0.65	6.00	P		U		B	1293
1293. Kayole Est. Rd. T	NCC 1293	Koma. Rd	Rd. B	0.00	0.65	0.65	5.00	P		U		F	1294
1294. Kayole Est. Rd. Z1	NCC 1294	Rd. T	End	0.00	0.30	0.30	5.00	P	C	U		F	1295
1295. Kayole Est. Rd. Z2	NCC 1295	Rd. T	Rd. L/R	0.00	0.40	0.40	5.00	P		U		B	1296
1296. Komarock Est. Rd1	NCC 1296	Koma. Rd	Koma Rd	0.00	0.85	0.85	7.00	P		U		F	1297
1297. Komarock Est. Rd2	NCC 1297	Rd. 2	Koma Rd	0.00	1.14	1.14	7.00	P		U		F	1298
1298. Komarock Est. RdA	NCC 1298	Koma. Rd	Kang. Rd	0.00	0.12	0.12	7.00	P		U		F	1299
"	NCC 1298	Koma. Rd	Kang. Rd	0.12	0.60	0.60	7.00	U(G)		U		B	1299
1299. Komarock Est. Rd1	NCC 1299	Rd. 20	Rd. L/R	0.00	0.24	0.24	5.00	P		U		F	1300
1300. Komarock Est. Rd10	NCC 1300	Rd. 2	End	0.00	0.16	0.16	5.00	P	C	U		B	1301
1301. Komarock Est. Rd11	NCC 1301	Rd. 2	End	0.00	0.13	0.13	5.00	P	C	U		B	1302
1302. Komarock Est. Rd12	NCC 1302	Rd. 2	End	0.00	0.11	0.11	5.00	P	C	U		B	1303
1303. Komarock Est. Rd13	NCC 1303	Rd. 2	End	0.00	0.08	0.08	5.00	P	C	U		F	1304
1304. Komarock Est. Rd14	NCC 1304	Rd. 2	End	0.00	0.14	0.14	5.00	P	C	U		B	1305
1305. Komarock Est. Rd15	NCC 1305	Rd. 20	End	0.00	0.22	0.22	6.00	P	C	U		B	1306
1306. Komarock Est. Rd16	NCC 1306	Rd. 20	End	0.00	0.29	0.29	5.50	P	C	U		B	1307
1307. Komarock Est. Rd2	NCC 1307	Koma. Rd	Koma Rd	0.00	0.11	0.11	5.00	P		U		F	1308
1308. Komarock Est. Rd3	NCC 1308	Rd. 2	Rd. 4	0.00	0.24	0.24	6.00	P		U		F	1309
1309. Komarock Est. Rd4	NCC 1309	Rd. 3	End	0.00	0.17	0.17	5.00	P		U		F	1310
1310. Komarock Est. Rd5	NCC 1310	Rd. 3	Rd. 2	0.00	0.21	0.21	5.00	P		U		F	1311
1311. Komarock Est. Rd6	NCC 1311	Rd. 2	Rd. 7	0.00	0.11	0.11	6.00	P		U		B	1312
1312. Komarock Est. Rd7	NCC 1312	Rd. 6	End	0.00	0.21	0.21	6.00	P		U		B	1313
1313. Komarock Est. Rd8	NCC 1313	Rd. 2	End	0.00	0.13	0.13	5.00	P	C	U		F	1314
1314. Komarock Est. Rd9	NCC 1314	Rd. 2	End	0.00	0.14	0.14	5.00	P	C	U		F	1315
1315. Savannah Est. RdL	NCC 1315	Rd. P	Rd. M	0.00	0.16	0.16	6.00	P		U		F	1316
1316. Savannah Est. RdM	NCC 1316	Rd. L	Rd. L	0.00	0.76	0.76	5.50	P		U		F	1317
1317. Savannah Est. RdN	NCC 1317	Rd. M	Rd. M	0.00	0.09	0.09	6.00	P		U		F	1318
1318. Savannah Est. RdO	NCC 1318	Rd. L	Rd. L	0.00	0.35	0.35	5.00	P		U		B	1319
1319. Sunrise Est. Rd. 1	NCC 1319	Rd. P	Rd. P	0.00	1.10	1.10	7.00	P	A	U		F	1320
1320. Sunrise Est. Rd. 5	NCC 1320	Rd. P	Rd. P	0.00	0.13	0.13	5.20	U(G)		U		F	1321

**TABLE 4.3-4 (10) ROAD INVENTORY IN NJIRU**

**GIBB AFRICA**

**AREA:** Nairobi

**ZONE:** Njiru

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1321. Sunrise Est. Rd. A	NCC 1321	End (z)	Rd. L/R	0.00	0.10	0.10	5.00	U(G)		U			1322
1322. Sunrise Est. Rd. B	NCC 1322	End (v-c)	Rd. L/R	0.00	0.45	0.45	5.00	P		U		F	1323
"	NCC 1322	End (v-c)	Rd. L/R	0.45	0.57	0.12	5.00	U(G)		U		B	1323
1323. Sunrise Est. Rd. C	NCC 1323	Rd. B	End	0.00	0.20	0.20	5.00	P	C	U		B	1324
1324. Sunrise Est. Rd. D	NCC 1324	Rd. B	End	0.00	0.07	0.07	5.00	P	C	U		F	1325
1325. Sunrise Est. Rd. E	NCC 1325	Rd. B	End	0.00	0.17	0.17	6.00	P	C	U		B	1326
1326. Sunrise Est. Rd. F	NCC 1326	Rd. B	End	0.00	0.14	0.14	5.00	P	C	U		F	1327
1327. Sunrise Est. Rd. Q	NCC 1327	Rd. I	Rd. R	0.00	0.13	0.13	5.60	P		U		B	1328
1328. Sunrise Est. Rd. R	NCC 1328	Rd. Q	Rd. S	0.00	0.28	0.28	5.50	P		U		B	1329
1329. Sunrise Est. Rd. S	NCC 1329	Rd. Q	Rd. Q	0.00	0.08	0.08	5.00	P		U		B	1330
1330. Sunrise Est. Rd. T	NCC 1330		Rd. L/R	0.00	0.08	0.08	5.00	U(G)		U		B	1331
1331. Sunrise Est. Rd. U	NCC 1331	Rd. 1	Rd. L/R	0.00	0.10	0.10	4.00	U(G)		U		B	1332
1332. Sunrise Est. Rd. V	NCC 1332	Rd. 1	Rd. B	0.00	0.17	0.17	6.00	P		U		F	1333
1333. Sunrise Est. Rd. W	NCC 1333	Rd. B	End	0.00	0.14	0.14	6.00	P	C	U		B	1334
1334. Sunrise Est. Rd. X	NCC 1334	Rd. W	End	0.00	0.13	0.13	5.00	U(G)	C	U		F	1335
1335. Sunrise Est. Rd. Z	NCC 1335	Rd. A	Rd. X	0.00	0.09	0.09	5.00	U(G)		U		B	1336
1336. Umoja 1, Rd. B1	NCC 1336	B Rd.	End	0.00	0.18	0.18	5.00	P	C	U		B	1337
1337. Umoja 1, Rd. B2	NCC 1337	Rd. B1	R S-C	0.00	0.21	0.21	4.20	P	A	U		F	1338
1338. Umoja 1, Rd. B3	NCC 1338	Rd. B1	R S-C	0.00	0.28	0.28	5.00	P	A	U		F	1339
1339. Umoja 1, Rd. B4	NCC 1339	Rd. C	R S-C	0.00	0.24	0.24	5.00	P	A	U		F	1340
1340. Umoja 1, Rd. O	NCC 1340	Rd. B	Rd. B	0.00	0.15	0.15	6.00	P	A	U		B	1341
1341. Umoja 1, Rd. P	NCC 1341	Ngob. Rd.	Ngob. Rd.	0.00	0.27	0.27	5.00	P	A	U		F	1342
1342. Umoja 1, Rd. P	NCC 1342	Rd. B	Rd. R	0.00	0.40	0.40	4.70	P		U		B	1343
1343. Umoja 1, Rd. Q	NCC 1343	Ngob. Rd.	Ngob. Rd	0.00	0.27	0.27	5.00	P	A	U		F	1344
1344. Umoja 1, Rd. Q1	NCC 1344	Olum. Rd	End	0.00	0.27	0.27	5.20	P	C	U		B	1345
1345. Umoja 1, Rd. R	NCC 1345	Rd. B	O/R Rd	0.00	0.38	0.38	5.00	U(E)	A	U		B	1346
1346. Umoja 1, Rd. S	NCC 1346	Muto. Rd.	Muto. Rd	0.00	0.27	0.27	5.00	P	A	U		F	1347
1347. Umoja 1, Rd. T	NCC 1347	Muto. Rd.	Muto. Rd	0.00	0.28	0.28	5.00	P	A	U		F	1348
1348. Umoja 1, Rd. U	NCC 1348	Muto. Rd.	Muto. Rd	0.00	0.11	0.11	4.00	P	A	U		B	1349
1349. Umoja 1, Rd. V	NCC 1349	Rd. B	End	0.00	0.14	0.14	3.80	P	C	U		B	1350
1350. Umoja 1, Rd. W	NCC 1350	Rd. B	Rd. B	0.00	0.24	0.24	5.00	P	A	U		F	1351
1351. Umoja 1, Rd. X	NCC 1351	Rd. B	Kang. Rd	0.00	0.38	0.38	7.00	P	A	U		F	1352
1352. Umoja 1, Rd. Z	NCC 1352	Ess. Rd.	End	0.00	1.34	1.34	6.40	P	C	U		F	1353

**TABLE 4.3-4 (10) ROAD INVENTORY IN NJIRU**

**ZONE: Njiru**

**AREA: Nairobi**

**GIBB AFRICA**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1353. Umoja 1, Rd. X1	NCC 1353	Rd. Z1	End	0.00	0.28	0.28	5.00	P	C	U		F	1354
1354. Umoja 1, Rd. Y1	NCC 1354	Rd. Z1	End	0.00	0.21	0.21	4.20	P	C	U		F	1355
1355. Umoja 1, Rd. Z1	NCC 1355	Rd. B	Rd. X1	0.00	0.18	0.18	5.00	P	A	U		B	1356
1356. Umoja 1, Cre. A	NCC 1356	Rd. B	Rd. B	0.00	0.24	0.24	5.30	P		U		F	1357
1357. Umoja 2, Rd. A	NCC 1357	Koma. Rd	Rd. B	0.00	0.50	0.50	7.00	P	A	U	M	B	1358
1358. Umoja 2, Rd. B	NCC 1358	Rd. A	Rd. A	0.00	3.83	3.83	7.00	P	L	U	M	F	1359
1359. Umoja 2, Rd. R	NCC 1359	Rd. P	Rd. A	0.00	0.63	0.63	4.20	P	A	U		F	1360
1360. Umoja 2, Rd. S	NCC 1360	Rd. A	Rd. T	0.00	0.59	0.59	3.20	P	A	U		B	1361
1361. Umoja 2, Rd. T	NCC 1361	Rd. S	Rd. U	0.00	0.53	0.53	5.00	P	A	U		F	1362
1362. Umoja 2, Rd. U	NCC 1362	Rd. B	Tarmac	0.00	0.45	0.45	6.90	P		U		F	1363
1363. Fr. Komarock Rd.30	NCC 1363	Koma. Rd	Muta. Rd	0.00	0.67	0.67	5.80	U(G)		U		F	1364
1364. Fr. Mutarakwa Rd.29	NCC 1364	Muta. Rd	End	0.00	0.54	0.54	5.00	P	C	U		F	1365
1365. Chebonyo Lane	NCC 1365	Rd. B	End	0.00	0.27	0.27	5.50	P	C	U		F	1366
1366. Ensenya Road	NCC 1366	Crst. A	End	0.00	0.20	0.20	4.10	P	C	U		F	1367
1367. Gaikuyu Crescent	NCC 1367	Gai. Rd	Gai. Rd.	0.00	0.28	0.28	4.90	P	A	U		F	1368
1368. Gaikuyu Road	NCC 1368	Rd. B	Gai. Rd.	0.00	0.32	0.32	4.60	P	A	U		B	1369
1369. John Osogo Road	NCC 1369	Rock Rd.	Rock Rd.	0.00	3.41	3.41	6.30	P	L	U	M	F	1370
1370. Kangundo Rd.(pt.1)	NCC 1370	O/R. Rd	Koma. Rd	0.00	1.80	1.80	7.00	P	D	U	B	F	1371
1371. Kangundo Rd.(pt.2)	NCC 1371	Kang. Rd	Koma. Rd	0.00	2.51	2.51	8.00	P	D	U	B	F	1372
1372. Kapsoit Crescent	NCC 1372	Kaps. Rd	Kaps. Rd.	0.00	0.28	0.28	4.20	P	A	U		B	1373
1373. Kapsoit Road	NCC 1373	Rd. B	End	0.00	0.33	0.33	4.40	P	C	U		B	1374
1374. Komarock Rd.(pt.1)	NCC 1374	Juja Rd.	Koma. Rd	0.00	20.15	20.15	6.70	P	D	U	B	B	1375
1375. Komarock Rd.(pt.2)	NCC 1375	Koma. Rd	Koma. Rd	0.00	1.15	1.15	7.40	P	D	U	B	F	1376
1376. Komarock Rd.(pt.3)	NCC 1376	Koma. Rd	NCC City	0.00	1.34	1.34	7.40	P	D	U	B	F	1377
1377. Komarock Rd.(pt.4)	NCC 1377	Koma. Rd	NCC City	0.00	3.83	3.83	6.30	P	D	U	B	F	1378
1378. Limutet Lane	NCC 1378	Nyan. Rd	End	0.00	0.12	0.12	5.00	P	C	U		F	1379
1379. Mu. Kenyatta Rd. 1	NCC 1379	Rock Rd.	J/O. Rd	0.00	2.07	2.07	6.70	P	L	U	M	F	1380
1380. Mu. Kenyatta Rd. 2	NCC 1380	Koma. Rd	J/O. Rd	0.00	1.00	1.00	7.50	P	L	U	M	F	1381
1381. Mutarakwa Road	NCC 1381	O/R. Rd	Koma. Rd	0.00	1.50	1.50	7.10	P	L	U	B	F	1382
1382. Mutonguni Crst.	NCC 1382	Muto. Rd	Muto. Rd.	0.00	0.27	0.27	5.00	P	A	U		B	1383
1383. Mutonguni Rd.	NCC 1383	Rd. B	Rd. U	0.00	0.33	0.33	4.00	P	A	U		B	1384
1384. Ngobini Road	NCC 1384	Rd. B	End	0.00	0.28	0.28	6.00	P	C	U		B	1385
1385. Ngobini Crescent	NCC 1385	Ngo. Rd	Ngo. Rd.	0.00	0.27	0.27	5.00	P	A	U		F	1386





TABLE 4.3-4 (11) ROAD INVENTORY IN STAREHE

AREA: Nairobi

ZONE: Starehe

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1398. Ring Rd. Ngara	NCC 1398	R/R. Rd.	End	0.00	0.66	0.66	6.80	P	C	U		B	1399
1399. Keekorok Ln. Rd. Y	NCC 1399	K/K. Rd.	Kiri. Rd	0.00	0.18	0.18	5.00	P	A	U		B	1400
1400. Kolobot St. Ann Sch	NCC 1400	Kolo Rd.	St. Ann	0.00	0.30	0.30	4.80	P		U		F	1401
1401. Lome Rd.-City H. S.	NCC 1401	Lome Rd.	C. H. S.	0.00	1.39	1.39	4.00	U(E)	A	U		B	1402
1402. Lome-E.Day N. Sch	NCC 1402	Lome Rd.	Desai Rd.	0.00	0.18	0.18	4.80	U(E)	A	U		B	1403
1403. Mikonge Ln-Agoi Cr.	NCC 1403	Agoi Rd.	Agoi Rd.	0.00	0.16	0.16	4.00	P	A	U		F	1404
1404. Muranga-Mshale Rd	NCC 1404	Mura. Rd.	Msha. Rd.	0.00	0.12	0.12	11.00	U(E)		U		B	1405
1405. Muranga R-Abt-End	NCC 1405	R/About	Muth. R/A	0.00	0.15	0.15	5.20	P		U		F	1406
1406. NCC River, Rd. A	NCC 1406	NCC Rv.	Kiri. Rd	0.00	2.19	2.19	7.00	P	A	U	M	F	1407
1407. Soitulol Rd.-Ndege Ln.	NCC 1407	Soi. Rd	Nde. Ln.	0.00	0.08	0.08	5.00	U(E)		U		B	1408
1408. Fr. Sheikh Road	NCC 1408	She. Rd.	N/View Rd	0.00	0.28	0.28	4.00	U(E)		U		B	1409
1409. Joins Ndege Lane	NCC 1409	Desa Rd.	Nde. Ln.	0.00	0.06	0.06	6.00	U(E)	A	U		B	1410
1410. Abidjan Road	NCC 1410	Lome Rd.	Park Rd.	0.00	0.17	0.17	6.00	P	A	U		F	1411
1411. Accra Road	NCC 1411	Rv. Rd.	T/M. St.	0.00	0.25	0.25	6.50	P	A	U	M	B	1412
1412. Agoi Road	NCC 1412	F/V. Rd.	End	0.00	0.81	0.81	5.65	P	C	U		B	1413
1413. Bajuni Road	NCC 1413	I/R. Rd.	Desai Rd.	0.00	0.21	0.21	4.00	U(E)	A	U		B	1414
1414. Banda Street	NCC 1414	Loit. St.	Kima St.	0.00	0.46	0.46	8.70	P	A	U		F	1415
1415. Baridi Lane	NCC 1415	Bari. Rd.	Juja. Rd.	0.00	0.16	0.16	5.90	P	A	U		F	1416
1416. Baridi Road	NCC 1416	F/V. Rd.	N/V. Rd.	0.00	0.24	0.24	6.15	P	L	U		F	1417
1417. Biashara Street	NCC 1417	Koin. St.	Moi Av.	0.00	0.37	0.37	10.00	P	A	U		F	1418
1418. Bilesha Rd. (pt.1)	NCC 1418	Des. Rd.	Lome. Rd.	0.00	0.30	0.30	4.50	P	A	U		F	1419
1419. Bilesha Rd. (pt.2)	NCC 1419	Des. Rd.	Lome. Rd.	0.00	0.11	0.11	4.00	P	A	U		F	1420
1420. Bonde Lane	NCC 1420	Juja Rd	Bari. Rd.	0.00	0.15	0.15	6.70	P	A	U		F	1421
1421. Buni Lane	NCC 1421	Juja Rd	Bari. Rd.	0.00	0.17	0.17	4.00	U(E)		U		F	1422
1422. Bustani Lane	NCC 1422	Agoi Rd.	Zamb. Ln.	0.00	0.21	0.21	4.50	P	A	U		F	1423
1423. Chai Road	NCC 1423	Juja Rd	Pam. Rd.	0.00	0.24	0.24	4.00	U(E)		U		B	1424
1424. Chambers Road	NCC 1424	Nga. Rd.	Mura. Rd.	0.00	0.50	0.50	5.40	P	A	U		F	1425
1425. Chanal Singh Rd.	NCC 1425	Kins. Rd.	Desai Rd.	0.00	0.34	0.34	4.00	P	A	U		B	1426
1426. City Hall Way	NCC 1426	Moi. Av	Uhu. H/W	0.00	0.86	0.86	13.30	P	D	U	B	F	1427
1427. Cross Lane	NCC 1427	Ndu. Rd.	Cross Rd.	0.00	0.37	0.37	7.00	P	A	U		F	1428
1428. Cross Road	NCC 1428	Nga. Rd.	R/C. Rd.	0.00	0.84	0.84	6.70	P	A	U		F	1429
1429. Desai Road. (pt.1)	NCC 1429	Mura. Rd.	Fore. Rd.	0.00	0.71	0.71	7.50	P	D	U	M	F	1430
1430. Desai Road (pt.2)	NCC 1430	Fore. Rd.	Mura. Rd.	0.00	0.42	0.42	6.35	P		U	M	F	1431

**TABLE 4.3-4 (11) ROAD INVENTORY IN STAREHE**

**AREA: Nairobi**

**ZONE: Starehe**

**GIBB AFRICA**

**ROAD INVENTORY**

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1431. Dubai Road	NCC 1431	Accra Rd.	Late Rd.	0.00	0.18	0.18	7.00	P	A	U		F	1432
1432. Dubois Lane	NCC 1432	Accra Rd.	Late Rd.	0.00	0.17	0.17	5.50	P		U		F	1433
1433. Duruma Road	NCC 1433	Rv. Rd.	R/C. Rd.	0.00	0.77	0.77	6.00	P	A	U		B	1434
1434. Elwak Lane	NCC 1434	R/C. Rd.	End	0.00	0.17	0.17	2.60	P	C	U		F	1435
1435. Fairview Road	NCC 1435	Mura. Rd.	Juja. Rd.	0.00	0.80	0.80	11.43	P	A	U		B	1436
1436. Fire Stone Lane	NCC 1436	Late Rd.	Rv. Rd.	0.00	0.27	0.27	5.60	P	A	U		F	1437
1437. Forest Lane	NCC 1437	Limu. Rd.	Fore. Rd.	0.00	0.72	0.72	4.00	U(E)	A	U		B	1438
1438. Forest Rd. (Nbi)	NCC 1438	Limu. Rd.	Fore. Rd.	0.00	1.49	1.49	7.00	P		U	M	F	1439
1439. Forest Rd. (Thika)	NCC 1439	Muse. Hill	Panga R/A	0.00	1.52	1.52	7.00	P		U		F	1440
1440. Gaberone Road	NCC 1440	Luth. Av.	Rv. Rd.	0.00	0.25	0.25	8.30	P	A	U		F	1441
1441. Galbe Robe Road	NCC 1441	Lasa. Rd.	Park Rd.	0.00	0.29	0.29	5.40	P	A	U		F	1442
1442. Galla Road	NCC 1442	Muna. Rd	Kipk. Rd.	0.00	0.19	0.19	5.50	P	A	U		F	1443
1443. Gen. Kago Street	NCC 1443	M/N. St.	Kau. St.	0.00	0.05	0.05	7.00	P		U		B	1444
1444. Gen. Wairungi St.	NCC 1444	2nd Av.	Kari. Mkt.	0.00	1.70	1.70	10.30	P	L	U		B	1445
1445. Gwasi Road	NCC 1445	R.Ngala	R/R. Pum.	0.00	0.14	0.14	6.50	P	A	U		B	1446
1446. Haile Selassie Av.	NCC 1446	Ngo. Rd	Land Rd.	0.00	2.55	2.55	18.60	P	D	U	B	F	1447
1447. Haji Road	NCC 1447	Chai Rd.	F/V. Rd.	0.00	0.24	0.24	5.30	P	L	U		F	1448
1448. Hakati Road	NCC 1448	T/M. St.	Tem. Rd.	0.00	0.24	0.24	5.30	P	A	U		F	1449
1449. Harambee Av.	NCC 1449	Uhu. H/W	Moi Av.	0.00	0.87	0.87	13.40	P	A	U		F	1450
1450. Harry Thuku Rd.	NCC 1450	Uhu. H/W	Uni. Way	0.00	0.71	0.71	6.80	P	A	U		F	1451
1451. Hombu Street	NCC 1451	R/R. Nga. Mura. Rd.	Mura. Rd.	0.00	1.00	1.00	6.90	P	L	U		F	1452
1452. Irungu Riika Rd.	NCC 1452	Nga. Rd.	Desai Rd.	0.00	0.26	0.26	12.00	P		U		B	1453
1453. Itesyo Lane	NCC 1453	Kipa. Rd.	Nga. Rd.	0.00	0.15	0.15	5.30	P	D	U		B	1454
1454. Jainsala Lane	NCC 1454	Keek. Rd.	Kiri. Rd.	0.00	0.27	0.27	6.50	P	A	U		F	1455
1455. Jodongo Lane	NCC 1455	Jodo. Rd.	End	0.00	0.25	0.25	6.00	P	C	U		B	1456
1456. Jodongo Road	NCC 1456	Kihu. Rd.	Ng. S. Sch	0.00	0.14	0.14	6.40	P	A	U		F	1457
1457. Kalongo Road	NCC 1457	Ngwe. Rd	Mura. Rd.	0.00	0.21	0.21	6.00	P		U		F	1458
1458. Kamae Lane	NCC 1458	Gabe. Rd.	Luth. Av.	0.00	0.07	0.07	5.20	P	A	U		F	1459
1459. Kaunda Street	NCC 1459	Ken. Av.	M/B. St.	0.00	0.75	0.75	9.00	P	A	U		F	1460
1460. Keekorok Road	NCC 1460	Ngat. Rd.	Kilo. Rd	0.00	0.33	0.33	7.00	P	A	U		B	1461
1461. Kenyatta Avenue	NCC 1461	Val. Rd.	Moi. Av.	0.00	0.79	0.79	12.80	P	H	U	B	F	1462
1462. Kianjuku Road	NCC 1462	Nga. Rd.	Kolo. Rd.	0.00	0.19	0.19	5.20	P	A	U		B	1463
1463. Kiarie Kihu Road	NCC 1463	Mura. Rd.	Bari. Rd.	0.00	0.60	0.60	5.40	P	A	U		B	1464

TABLE 4.3-4 (11) ROAD INVENTORY IN STAREHE

AREA: Nairobi

ZONE: Starehe

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1464. Kifaruru Lane	NCC 1464	Agoi. Rd.	Shei. Rd.	0.00	0.16	0.16	4.00	U(E)		U		B	1465
1465. Kihiumwiri Road	NCC 1465	Nga. Rd.	Jodo. Rd	0.00	0.31	0.31	6.20	P	A	U		F	1466
"	NCC 1465	Nga. Rd.	Jodo. Rd	0.31	0.45	0.14	6.20	U(E)	A	U		F	1466
1466. Kijabe Street	NCC 1466	H/Th. Rd.	Globe Rd.	0.00	0.67	0.67	6.30	P	L	U		F	1467
1467. Kilome Road	NCC 1467	Rv. Rd.	Kiri. Rd	0.00	0.18	0.18	6.00	P	A	U		F	1468
1468. Kimathi Street	NCC 1468	M/N. St.	Moi Av.	0.00	0.45	0.45	12.00	P	A	U		F	1469
1469. Kinshasha Road	NCC 1469	Mura. Rd.	Park Rd.	0.00	0.49	0.49	6.00	P	A	U		F	1470
"	NCC 1469	Mura. Rd.	Park Rd.	0.49	0.86	0.37	6.00	U(E)	A	U		F	1470
1470. Kinyanjui Street	NCC 1470	R/C. Rd.	Digo. Rd.	0.00	0.97	0.97	6.50	P	A	U		F	1471
1471. Kipande Road	NCC 1471	R/A. Muse	Mura. Rd.	0.00	0.90	0.90	8.30	P	A	U		F	1472
1472. Kipipiri Road	NCC 1472	Fore. Rd.	Mura. Rd.	0.00	0.15	0.15	5.90	P	A	U		F	1473
1473. Kipkambus Road	NCC 1473	Nga. Rd.	Kolo. Rd.	0.00	0.26	0.26	4.70	P	A	U		F	1474
1474. Kirinyaga Crescent	NCC 1474	Kiri. Rd.	Kiri. Rd	0.00	0.34	0.34	4.00	P	A	U		B	1475
1475. Kirinyaga Lane	NCC 1475	Voi. Rd.	Jain. Rd	0.00	0.06	0.06	6.00	P	A	U		F	1476
1476. Kirinyaga Road	NCC 1476	Globe R/A	R/C. Rd.	0.00	1.22	1.22	9.00	P		U	M	F	1477
1477. Koinange Lane	NCC 1477	Koin. St.	Loita St.	0.00	0.09	0.09	4.60	P	A	U		F	1478
1478. Koinange Street	NCC 1478	Uni. Way	Kau. St.	0.00	0.72	0.72	7.20	P	D	U		F	1479
1479. Kolobot Road	NCC 1479	Fore. Rd.	Limu. Rd.	0.00	0.87	0.87	7.60	P	A	U		F	1480
1480. Kombo Muniyiri Rd.	NCC 1480	Quar. Rd.	Pumw. Rd	0.00	0.71	0.71	9.70	P	A	U	B	F	1481
1481. Kulalu Road	NCC 1481	Park Rd.	Musi. Rd.	0.00	0.23	0.23	4.00	U(G)	A	U		F	1482
1482. Kumasi Road	NCC 1482	Rv. Rd.	Kiri. Rd	0.00	0.26	0.26	6.00	P	A	U		B	1483
1483. Lagos Road	NCC 1483	Lat. Rd.	T/M. St.	0.00	0.24	0.24	11.20	P	A	U		F	1484
1484. Lasai Road	NCC 1484	Mogi. Rd.	Juja Rd	0.00	0.30	0.30	5.30	P	L	U		B	1485
1485. Latema Road	NCC 1485	T/M St.	Rv. Rd.	0.00	0.23	0.23	12.40	P	A	U	M	F	1486
1486. Limuru Road	NCC 1486	R/R. Park	Muth. Rd	0.00	0.68	0.68	7.00	P	P	U	B	F	1487
1487. Loita Street	NCC 1487	Uni. Way	Keny. Av.	0.00	0.55	0.55	8.60	P	L	U		F	1488
1488. Lome Road	NCC 1488	Mura. Rd.	Kinshasa	0.00	0.61	0.61	4.20	P	A	U		F	1489
1489. Lt. Tumbo Avenue	NCC 1489	Har. Av.	H/S. Av.	0.00	0.17	0.17	13.00	P	A	U		F	1490
1490. Lumbwa Street	NCC 1490	Kiny. St.	Meru Rd.	0.00	0.43	0.43	6.60	P	A	U		F	1491
1491. Luthuli Av.	NCC 1491	T/M St.	Rv. Rd.	0.00	0.33	0.33	12.60	P	L	U	M	B	1492
1492. Madura Lane	NCC 1492	Juja Road	Bari. Rd	0.00	0.13	0.13	6.00	P	A	U		B	1493
1493. Mama Ngina Street	NCC 1493	Moi. Ave.	M/B. St.	0.00	0.48	0.48	6.00	P	L	U		F	1494
1494. Market Street	NCC 1494	Loita St.	M/B. St.	0.00	0.22	0.22	4.60	P	A	U		F	1495

TABLE 4.3-4 (11) ROAD INVENTORY IN STAREHE

AREA: Nairobi

ZONE: Starehe

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1495. Mbono Crescent	NCC 1495	Mbono Rd	F/V. Rd.	0.00	0.21	0.21	5.50	P	A	U		B	1496
1496. Mbono Lane	NCC 1496	Mbono Rd	Pamb. Rd	0.00	0.13	0.13	5.50	P	A	U		F	1497
1497. Mbono Road	NCC 1497	R/R Ngar	F/V. Rd.	0.00	0.22	0.22	7.40	P	L	U		F	1498
1498. Mfangano Lane	NCC 1498	H/S. Av.	R/Ngala	0.00	0.45	0.45	5.60	P	A	U		F	1499
1499. Mfangano Street	NCC 1499	H/S. Av.	Luth. Av.	0.00	0.48	0.48	8.30	P	L	U	B	F	1500
1500. Mikonge Lane	NCC 1500	N/V. Rd.	Agoi Rd.	0.00	0.23	0.23	5.80	P	A	U		F	1501
1501. Miwa Lane	NCC 1501	Agoi Rd.	Bari. Rd	0.00	0.63	0.63	4.00	P	A	U		F	1502
1502. Mogira Road	NCC 1502	Park Rd.	R/R. Nga.	0.00	0.40	0.40	5.60	P	A	U		F	1503
1503. Moi Avenue	NCC 1503	Uni. Way	H/S. Av.	0.00	1.43	1.43	14.00	P	D	U	B	F	1504
1504. Moktar Daddah St.	NCC 1504	Moi. Ave.	Koin. St.	0.00	0.34	0.34	10.00	P	A	U		F	1505
1505. Monrovia Street	NCC 1505	Uhu. H/W	Moi Av.	0.00	0.30	0.30	6.00	P	A	U		F	1506
1506. Mshale Lane	NCC 1506	Desai Rd	O/A. Rd.	0.00	0.52	0.52	6.00	U(E)	A	U		B	1507
1507. Mtaragwa Lane	NCC 1507	She. Ln	Mwe. Ln.	0.00	0.33	0.33	4.00	P	A	U		B	1508
1508. Muhoroni Close	NCC 1508	Nga. Rd.	End	0.00	0.13	0.13	4.00	U(E)	C	U		B	1509
1509. Muindi Mbingu Street	NCC 1509	M/N. St.	Moi Av.	0.00	0.77	0.77	9.00	P	L	U		F	1510
1510. Muniy Road (pt.1)	NCC 1510	R/N. St.	Gabe. Rd.	0.00	0.30	0.30	10.70	P	A	U	M	F	1511
1511. Muniy Road (pt.2)	NCC 1511	Gabe. Rd.	Accr. Rd.	0.00	0.15	0.15	6.40	P	A	U	M	F	1512
1512. Muranga Rd. (Thika)	NCC 1512	Thika Rd.	Nga. Rd.	0.00	1.01	1.01	20.20	P	A	U	B	F	1513
1513. Muranga Rd. (pt.1)	NCC 1513	Globe	Moi Av.	0.00	0.18	0.18	9.00	P	D	U	B	F	1514
1514. Muranga Rd. (pt.2)	NCC 1514	Fore. Rd.	Mur. Rd.	0.00	1.38	1.38	12.00	P	D	U	B	F	1515
1515. Muranga Rd. (pt.3)	NCC 1515	Thika Rd.	Fore. Rd.	0.00	0.49	0.49	14.00	P	A	U	B	F	1516
1516. Muratina Street	NCC 1516	Juja Road	Gen. W. St	0.00	1.43	1.43	4.00	U(E)	D	U		B	1517
1517. Mushembi Road	NCC 1517	Nga. Rd.	Limu. Rd.	0.00	0.39	0.39	5.40	P	A	U		F	1518
1518. Musindi Lane	NCC 1518	Kihu. Rd.	Mish Rd.	0.00	0.45	0.45	4.00	P	A	U		B	1519
1519. Musindi Road	NCC 1519	Kihu. Rd.		0.00	0.40	0.40	6.20	P	A	U		B	1520
1520. Muslim Road	NCC 1520	Park Rd.	Kula Rd.	0.00	0.10	0.10	5.20	P	A	U		F	1521
"	NCC 1520	Park Rd.	Kula Rd.	0.10	0.39	0.29	5.20	U(E)	A	U		F	1521
1521. Mwatate Lane	NCC 1521	R/C. Rd.	End	0.00	0.16	0.16	3.60	P	C	U		F	1522
1522. Mweni Road	NCC 1522	Kalo. Rd.	Juja Rd.	0.00	0.76	0.76	6.70	P	A	U		F	1523
1523. Mwezi Lane	NCC 1523	N/V. Rd.	She. Rd.	0.00	0.23	0.23	4.00	P	A	U		F	1524
1524. Nahar Singh Road	NCC 1524	Mura. Rd.	Thing Rd.	0.00	0.38	0.38	6.00	U(E)	A	U		F	1525
1525. Ndege Lane	NCC 1525	F/D. Jc	Fore. Rd.	0.00	0.54	0.54	4.00	U(E)	A	U		F	1526
1526. Ndovu Lane	NCC 1526	F/V. Rd.	N/V. Rd.	0.00	0.51	0.51	4.00	U(E)	A	U		F	1527

TABLE 4.3-4 (11) ROAD INVENTORY IN STAREHE

AREA: Nairobi

ZONE: Starehe

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1527. Ndumberi Road	NCC 1527	Rv. Rd.	Gr. Rd.	0.00	0.11	0.11	6.00	P		U		F	1528
1528. Ngata Crescent	NCC 1528	Nga. Rd.	Nga. Rd.	0.00	0.20	0.20	5.50	P		U		F	1529
1529. Ngata Lane	NCC 1529	Mura. Rd.	R/G. Rd.	0.00	0.08	0.08	4.00	P	A	U		F	1530
1529. Ngata Lane	NCC 1529	Mura. Rd.	R/G. Rd.	0.00	0.20	0.20	4.00	U(E)	A	U		F	1531
1530. Ngata Road	NCC 1530	Muse. R/A	Mura. Rd.	0.00	0.98	0.98	9.00	P	D	U		F	1532
1531. Ngata Road 2	NCC 1531	Mura. Rd.	Park Rd.	0.00	0.81	0.81	14.00	P	D	U	B	F	1533
1532. Ngata Road 3	NCC 1532	Park Rd.	Mura. Rd.	0.00	0.39	0.39	7.00	P	D	U	B	F	1534
1533. Ngariama Road	NCC 1533	Rv. Rd.	Kiri. Ln.	0.00	0.11	0.11	6.00	P	L	U		F	1535
1534. Nkurumah Ave.	NCC 1534	Moi. Ave.	Moi. Av.	0.00	0.21	0.21	6.00	P	A	U		F	1536
1535. Nkurumah Lane	NCC 1535	Nkur. Av.	Hara. Av.	0.00	0.19	0.19	8.90	P	L	U		F	1537
1536. North View Road	NCC 1536	Mura. Rd.	Juja Rd	0.00	0.79	0.79	6.65	P	L	U		F	1538
1537. Nyambene Drive	NCC 1537	R/R. Nga	Mura. St.	0.00	0.67	0.67	5.60	P	A	U		F	1539
1538. Okoth Aura Road	NCC 1538	Mura. Rd.	Fore. St.	0.00	0.25	0.25	4.90	P	L	U		F	1540
1539. Oshwal Road	NCC 1539	Kolo. Rd.	Limu. Rd.	0.00	0.16	0.16	5.50	P	C	U		F	1541
1540. Pamba Close	NCC 1540	F/V. Rd	End	0.00	0.19	0.19	4.80	P	A	U		F	1542
1541. Pamba Road	NCC 1541	F/V. Rd	Mbono Rd	0.00	0.29	0.29	8.05	P	A	U		F	1543
1542. Pareto Road	NCC 1542	Chai Rd.	F/V. Rd.	0.00	0.14	0.14	5.00	U(E)	A	U		B	1544
1543. Park Road (pt.1)	NCC 1543	Ngata Rd	Juja Rd	0.00	1.02	1.02	9.20	P	D	U	B	B	1545
1544. Park Road (pt.2)	NCC 1544	Kins. Rd	Juja Rd	0.00	1.04	1.04	9.50	P	D	U	B	F	1546
1545. Parliament Road	NCC 1545	H/S. Av.	Kau. St.	0.00	0.63	0.63	13.40	P	D	U		F	1547
1546. Pokot Road	NCC 1546	Oshwal Rd	End	0.00	0.23	0.23	5.50	P	C	U		B	1548
1547. Quarry Road	NCC 1547	Digo Rd	Park Rd.	0.00	1.17	1.17	7.60	P	A	U	M	F	1549
1548. Racecourse Road	NCC 1548	NCC Rv.	H/S. Av.	0.00	0.75	0.75	15.00	P	L	U	B	F	1550
1549. Raiya Lane	NCC 1549	G/R. Rd	Juja Rd	0.00	0.16	0.16	6.00	U(G)	A	U		B	1551
1550. Ramesh Gautama Rd	NCC 1550	Mura. Rd.	Nga. Rd	0.00	0.35	0.35	6.00	P	A	U		F	1552
1551. Ring Road Ngata	NCC 1551	Mura. Rd.	GW. St.	0.00	1.70	1.70	7.50	P	L	U	B	F	1553
1552. Ring Road Pumwani	NCC 1552	R/C. Rd.	Land Rd.	0.00	0.61	0.61	25.00	P	D	U	B	B	1554
1553. River Lane	NCC 1553	Dur. Rd.	Cross Rd	0.00	0.49	0.49	2.00	P	A	U		B	1555
1554. River Road	NCC 1554	T/M St.	R/N. St.	0.00	1.07	1.07	11.90	P	A	U	M	B	1556
1555. Ronald Ngala St.	NCC 1555	R/C. Rd.	Moi. Av.	0.00	0.60	0.60	14.60	P	A	U	B	F	1557
1556. Sheikh Karume Lane	NCC 1556	Mfa. St	Muny. Rd.	0.00	0.27	0.27	4.80	P	A	U		F	1558
1557. Sheikh Karume Road	NCC 1557	Rv. Rd.	Mfa. St.	0.00	0.30	0.30	5.40	P	A	U		F	1559
1558. Sheikh Road	NCC 1558	F/V. Rd	Muta. Ln.	0.00	0.33	0.33	5.20	P	A	U		F	1560

TABLE 4.3-4 (11) ROAD INVENTORY IN STAREHE

AREA: Nairobi

ZONE: Starehe

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1559. Shillingi Road	NCC 1559	Mush. Rd	Kian. Rd.	0.00	0.18	0.18	4.50	P	A	U		B	1561
1560. Simba Street	NCC 1560	M/N. St.	C/H. Way	0.00	0.09	0.09	13.00	P	A	U		F	1562
1561. Simbi Road	NCC 1561	Desai Rd	Kins. Rd.	0.00	0.40	0.40	5.00	P	A	U		B	1563
1562. Soit Ololoi Road	NCC 1562	Desai Rd	O/A. Rd.	0.00	0.29	0.29	5.20	P	L	U		B	1564
1563. Songot Walk	NCC 1563	G/R. Rd	Mogi. Rd.	0.00	0.37	0.37	5.10	P	L	U		F	1565
1564. Standard Street	NCC 1564	Koin. St.	Kima. Rd.	0.00	0.44	0.44	9.00	P	A	U		F	1566
1565. Taifa Road	NCC 1565	C/H. Way	Hara. Av.	0.00	0.29	0.29	13.20	P	L	U		F	1567
1566. Taifa Lane	NCC 1566	Nga. Rd.	Tait. Rd.	0.00	0.15	0.15	3.70	P	A	U		F	1568
1567. Taveta Road	NCC 1567	Accr. Rd.	Late Rd.	0.00	0.18	0.18	8.30	P	A	U		F	1569
1568. Temple Road	NCC 1568	R/C. Rd.	T/M. St.	0.00	0.39	0.39	9.40	P	L	U		F	1570
1569. Thingira Road	NCC 1569	Desai Rd	Kins. Rd.	0.00	0.37	0.37	4.00	P	A	U		F	1571
1570. Timboroa Lane	NCC 1570	Lat. Rd.	Acc. Rd.	0.00	0.18	0.18	5.70	P	A	U		F	1572
1571. Timboroa Road	NCC 1571	Lat. Rd.	Lag. Rd.	0.00	0.14	0.14	6.50	P	L	U		F	1573
1572. Tom Mboya Street	NCC 1572	H/S. Av.	Rv. Rd.	0.00	1.06	1.06	6.70	P	L	U		F	1574
1573. Tsavo Lane	NCC 1573	Accr. Rd.	Lat. Rd.	0.00	0.17	0.17	5.60	P	A	U		F	1575
1574. Tsavo Road	NCC 1574	Lat. Rd.	Acc. Rd.	0.00	0.18	0.18	7.00	P	A	U		F	1576
1575. Tubman Street	NCC 1575	Moi Av.	Koin. St.	0.00	0.39	0.39	4.80	P	A	U		F	1577
1576. Uhuru Highway	NCC 1576	Nyayo St.	Chiro. Rd.	0.00	3.66	3.66	18.80	P	H	U		F	1578
1577. Ukwala Road	NCC 1577	Jogo. Rd.	Baha Rd.	0.00	0.42	0.42	6.00	P	L	U		B	1579
1578. University Way	NCC 1578	Uhu. H/W	Moi. Av.	0.00	0.46	0.46	15.20	P	P	U		F	1580
1579. Utalii Street	NCC 1579	Loita St.	U/H'way	0.00	0.16	0.16	4.80	P	A	U		F	1581
1580. Uyoma Street	NCC 1580	R/C. Rd.	R/N. St.	0.00	0.26	0.26	12.00	P	A	U		F	1582
1581. Voi Road	NCC 1581	Rv. Rd.	Kiri Rd.	0.00	1.00	1.00	12.50	P		U		F	1583
1582. Wabera Street	NCC 1582	Band. St.	C/H. Way	0.00	0.36	0.36	5.90	P		U		F	1584
1583. Watalii Street	NCC 1583	M/N. St.	C/H. Way	0.00	0.08	0.08	9.00	P	A	U		F	1585
1584. Webuye Road	NCC 1584	Desai Rd	N/S. Rd.	0.00	0.12	0.12	6.00	P		U		B	1586
"	NCC 1584	Desai Rd	N/S. Rd.	0.12	0.27	0.15	6.00	U(E)		U		B	1586
1585. Yatta Road	NCC 1585	R/C. Rd.	R/R. Pum	0.00	0.08	0.08	4.00	P	A	U		F	1587
1586. Zambarau Lane	NCC 1586	Miko. Ln.	Mw. Ln	0.00	0.26	0.26	6.40	P	A	U		F	1588
"	NCC 1586	Miko. Ln.	Mw. Ln	0.26	0.32	0.06	6.40	U(E)	A	U		B	1588

TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

ROAD INVENTORY

AREA: Nairobi

ZONE: Westland

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1587. Lw. Kabete-Kyuna Rd	NCC 1587	L/K. Rd	Kyuni Rd	0.00	0.13	0.13	4.00	U(E)	A	U		B	1587
1588. G. Est. ICRAF Rd.	NCC 1588	U/N. Av.	Icraf	0.00	0.15	0.15	5.60	P		U		F	1588
"	NCC 1588	U/N. Av.	Icraf	0.15	0.76	0.61	5.60	U(G)		U		F	1588
1589. Gigiri Est. Rd. N	NCC 1589	Rd. P1	Rd. P2	0.00	0.54	0.54	5.30	P		U		B	1589
1590. Gigiri Est. Rd. P	NCC 1590	Rd. P1-P2	End	0.00	0.25	0.25	5.30	P	C	U		B	1590
1591. Gigiri Est. Rd. S	NCC 1591	Unicef	End	0.00	0.52	0.52	5.30	P	C	U		F	1591
1592. Gigiri Est. Rd. P2-P1	NCC 1592	Rd. P2	Rd. P1	0.00	2.41	2.41	6.40	P		U		F	1592
1593. Gigiri Est. Rd. Q-1	NCC 1593	U/N. Av.	Rd. P2-P1	0.00	0.32	0.32	5.30	P		U		B	1593
1594. Gigiri Est. Rd. Q-2	NCC 1594	U/N. Av.	Rd. P2-P1	0.00	0.08	0.08	5.30	U(E)		U		B	1594
1595. Gigiri, KTTC Rd. Z	NCC 1595	U/N. Av.	KTTC	0.00	0.18	0.18	5.30	P	A	U		B	1595
1596. K. I. Sch. - Peponi	NCC 1596	K. Int. Sch.	Pepo Rd.	0.00	1.22	1.22	5.30	P	A	U		B	1596
1597. Lw. Kabete-Waiyaki W.	NCC 1597	L/W. Rd.	Wai. Way	0.00	3.68	3.68	6.40	P	D	U		F	1597
1598. Lw. Peponi Rd. JC	NCC 1598	Peponi Rd	End	0.00	0.22	0.22	3.00	P	C	U		F	1598
1599. Ny. Est. E1, E2, E3	NCC 1599	Rd. D2-C3	Rd. E3	0.00	0.41	0.41	5.30	P		U		B	1599
1600. Ny. Est. C1, C2-A2	NCC 1600	C1 (c3 d2)	Nge. Rd.	0.00	1.39	1.39	5.30	P		U		F	1600
1601. Nyari Es. B1-A2-1	NCC 1601	R/H. Rd.	Nge. Rd.	0.00	0.33	0.33	5.30	P		U		B	1601
1602. Nyari Es. B1-A2-2	NCC 1602	R/H. Rd.	Nge. Rd.	0.00	0.22	0.22	5.30	U(E)		U		B	1602
1603. Nyari Es. C3-D2	NCC 1603	Rd. C3	R/H. Rd.	0.00	1.75	1.75	6.40	P		U		F	1603
1604. Nyari Es. D1-D2	NCC 1604	Rd. C3-D2	End	0.00	0.15	0.15	5.30	P	C	U		F	1604
1605. Nyari Est. F1-F2	NCC 1605	C1/C2/A2	End	0.00	0.55	0.55	5.30	P	C	U		F	1605
1606. Nyari Est. G1-G2	NCC 1606	R/H. Rd.	End	0.00	0.21	0.21	2.27	U(E)		U		B	1606
1607. Nyari Est. H1-H2	NCC 1607	E1-D2-Rd	End	0.00	0.44	0.44	5.42	P	C	U		F	1607
1608. Nyari Est. K1-K2	NCC 1608	C1/C2 Rd	C2/C3 Rd.	0.00	0.15	0.15	5.30	P		U		F	1608
1609. Opp. Wambugu Close	NCC 1609	Park Rd.	Pa-D-Ns	0.00	0.40	0.40	4.70	P		U		F	1609
1610. Runda Est. Rd. D	NCC 1610	Run. Gr.	End	0.00	0.30	0.30	5.30	P	C	U		F	1610
1611. Runda Est. Rd. E	NCC 1611	Run. Gr.	End	0.00	0.03	0.03	5.30	P	C	U		F	1611
1612. Runda Est. Rd. F	NCC 1612	Run. Gr.	End	0.00	0.48	0.48	5.30	P	C	U		F	1612
1613. Runda Est. Rd. G	NCC 1613	Rd. H	Rd. P	0.00	0.23	0.23	5.30	P	A	U		F	1613
1614. Runda Est. Rd. H	NCC 1614	Ruak. Rd.	End	0.00	1.24	1.24	5.30	P	C	U		B	1614
1615. Runda Est. Rd. J	NCC 1615	Rd. H	End	0.00	0.29	0.29	5.30	P	C	U		F	1615
"	NCC 1615	Rd. H	End	0.29	0.91	0.62	5.30	U(G)		U		B	1615
1616. Runda Est. Rd. K	NCC 1616	Rd. J	Rd. H	0.00	0.75	0.75	5.30	P		U		F	1616
1617. Runda Est. Rd. L	NCC 1617	Rd. H	End	0.00	0.25	0.25	5.30	P	C	U		B	1617

TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

ROAD INVENTORY AREA: Nairobi ZONE: Westland GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1618. Runda Est. Rd. M	NCC 1618	Rd. K	Rd. J	0.00	0.19	0.19	5.30	P	C	U		B	1618
1619. Runda Est. Rd. N	NCC 1619	Rd. H	End	0.00	0.56	0.56	5.30	P	C	U		B	1619
1620. Runda Est. Rd. P	NCC 1620	Rd. N	End	0.00	0.31	0.31	5.30	P	C	U		B	1620
1621. Shanzu-Grevillua Gr.	NCC 1621	Sha. Rd.	Gre-Gr.	0.00	0.30	0.30	5.75	U(E)	C	U		B	1621
1622. Spr. Valley - End	NCC 1622	S/V. Rd.	End	0.00	0.15	0.15	5.30	P	C	U		F	1622
1623. Spr. Valley - End	NCC 1623	S/V. Rd.	End	0.00	0.15	0.15	5.00	P	C	U		F	1623
1624. Spr. Valley - End	NCC 1624	S/V. Rd.	End	0.00	0.10	0.10	4.50	P	C	U		F	1624
1625. Wispers Est. Rd. B	NCC 1625	U/N. Av.	End	0.00	0.33	0.33	5.10	P	C	U		F	1625
1626. Wispers Est. Rd. C	NCC 1626	Rd. B	End	0.00	0.22	0.22	5.30	P	C	U		F	1626
1627. Wispers Est. Rd. D	NCC 1627	U/N. Av.	Ros. Aca	0.00	0.30	0.30	5.30	P	C	U		B	1627
1628. Wispers Est. Rd. E	NCC 1628	Rd. D	End	0.00	0.31	0.31	5.30	P	C	U		F	1628
1629. Wispers Est. Rd. F	NCC 1629	Rd. E	End	0.00	0.20	0.20	5.30	P	C	U		F	1629
1630. Wispers Est. Rd. G	NCC 1630	Rd. D	End	0.00	0.39	0.39	5.30	P	C	U		F	1630
1631. Wispers Est. Rd. H	NCC 1631	U/N. Av.	End	0.00	0.66	0.66	5.30	P	C	U		B	1631
1632. Wispers Est. Rd. J	NCC 1632	U/N. Av.	End	0.00	0.95	0.95	6.30	P	C	U		F	1632
1633. Wispers Est. Rd. K	NCC 1633	Rd. J	End	0.00	0.18	0.18	5.30	P	C	U		F	1633
1634. Wispers Est. Rd. M	NCC 1634	U/N. Av.	End	0.00	0.27	0.27	5.30	P	C	U		B	1634
1635. At Thigiri + Peponi	NCC 1635	Thigi. Rd.	Pepo Rd.	0.00	0.18	0.18	4.30	P	C	U		F	1635
1636. Crc On Thigiri Rd.	NCC 1636	Thigi. Rd.	Thigi. Rd.	0.00	0.49	0.49	5.30	P	C	U		F	1636
1637. Fr. Jacaranda Hotel	NCC 1637	Jaca. H'tel		0.00	0.19	0.19	6.20	P	C	U		B	1637
1638. Fr. Magumu Crsc.	NCC 1638	Ma. Crsc.	End	0.00	0.07	0.07	4.80	P	C	U		B	1638
1639. Fr. Taarifa Lane	NCC 1639	Taa. Ln.	End	0.00	0.22	0.22	4.00	U(E)	C	U		B	1639
1640. Fr. Wood Vale Gr.	NCC 1640	W/V. Gr.	End	0.00	0.11	0.11	5.40	P	C	U		F	1640
1641. Off Muthaiga Rd. 1	NCC 1641	Muth. Rd.	End	0.00	0.16	0.16	4.00	U(E)	C	U		B	1641
1642. Off Muthaiga Rd. 2	NCC 1642	Muth. Rd.	End	0.00	0.18	0.18	4.00	U(E)	C	U		B	1642
1643. Off Thigiri Ridge Rd.	NCC 1643	Th/R. Rd.	End	0.00	0.17	0.17	5.60	P	C	U		B	1643
1644. 1st Parklands Av.	NCC 1644	Limu. Rd.	Mpa. Rd.	0.00	1.78	1.78	5.97	P	L	U		B	1644
1645. 2nd Parklands Av.	NCC 1645	Limu. Rd.	Mpa. Rd.	0.00	1.76	1.76	5.92	P	L	U		F	1645
1646. 3rd Parklands Av.	NCC 1646	Limu. Rd.	Mpa. Rd.	0.00	1.75	1.75	7.00	P	L	U		F	1646
1647. 4th Parklands Av.	NCC 1647	Limu. Rd.	Ngao. Rd.	0.00	1.36	1.36	6.87	P	L	U		F	1647
1648. 5th Parklands Av.	NCC 1648	Limu. Rd.	Masa. Rd.	0.00	0.83	0.83	7.00	P	L	U		F	1648
1649. 6th Parklands Av.	NCC 1649	Limu. Rd.	Mwa. Rd.	0.00	0.51	0.51	6.20	P	L	U		B	1649
1650. Bendera Lane	NCC 1650	S/V. Rd.	End	0.00	1.35	1.35	4.50	P	C	U		B	1650



TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

AREA: Nairobi

ZONE: Westland

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1651. Bhanderi Road	NCC 1651	Mara. Rd.	Masa. Rd.	0.00	0.40	0.40	5.11	P	L	U		F	1651
1652. Boundary Road	NCC 1652	SV. Rd.	End	0.00	0.27	0.27	3.00	U(G)	C	U		F	1652
1653. Brookside Close	NCC 1653	Br. Gr.	Sch. Ln.	0.00	0.11	0.11	4.90	P	A	U		F	1653
1654. Brookside Drive	NCC 1654	Mug. Gr.	L/K. Rd.	0.00	1.33	1.33	6.70	P	L	U		B	1654
1655. Brookside Garden	NCC 1655	Mug. Gr.	Br. Dr.	0.00	0.41	0.41	6.70	P	L	U		B	1655
"	NCC 1655	Mug. Gr.	Br. Dr.	0.41	0.50	0.09	6.70	U(G)	L	U		B	1655
1656. Brookside Grove	NCC 1656	Wai. Way	Sch. Ln.	0.00	0.49	0.49	5.60	P	L	U		B	1656
1657. Chiromo Lane	NCC 1657	Chi. Rd.	Ojjo Rd.	0.00	0.60	0.60	5.30	P	A	U		B	1657
1658. Cork Crescent	NCC 1658	Taa Rd.	Taa. Rd.	0.00	0.21	0.21	5.00	P	A	U		B	1658
1659. Cross Road	NCC 1659	L/V. Rd.	End	0.00	0.50	0.50	5.40	P	C	U		F	1659
1660. Cross Way Lane	NCC 1660	West Cl.	Muth. Rd.	0.00	0.30	0.30	5.00	P	A	U		F	1660
1661. Donyo Sabuk Av.	NCC 1661	Peponi Rd	G/M. Dr.	0.00	0.77	0.77	3.80	U(E)	D	U		B	1661
1662. Donyo Sabuk Ln.	NCC 1662	G/M. Dr.	D/S. Av.	0.00	0.31	0.31	4.00	U(E)	A	U		B	1662
1663. El. Ravine Grdns.	NCC 1663	E/R. Rd.	End	0.00	0.20	0.20	3.70	P	C	U		B	1663
1664. El. Ravine Gr.	NCC 1664	E/R. Rd.	End	0.00	0.11	0.11	3.71	P	C	U		B	1664
1665. El. Ravine Rd.	NCC 1665	Peponi Rd	R/R. PKL	0.00	0.68	0.68	5.50	P	D	U		F	1665
1666. Farasi Lane	NCC 1666	Nge. Rd.	L/K. Rd.	0.00	0.90	0.90	3.50	U(G)		U		B	1666
1667. Farasi Way	NCC 1667	L/K. Rd.	Far. Ln.	0.00	0.60	0.60	3.10	U(G)		U		B	1667
1668. Forces Lane	NCC 1668	R/R. PKL	Mpa. Rd.	0.00	0.40	0.40	5.70	P	A	U		B	1668
1669. Forest Road	NCC 1669	Limu. Rd.	Mura. Rd.	0.00	1.28	1.28	8.00	P	D	U	M	F	1669
1670. Forward Close	NCC 1670	City/B	Kiti. Rd.	0.00	0.81	0.81	4.00	P	L	U		B	1670
1671. G. Mathenge Grdns.	NCC 1671	Gen. M. Dr.	L/K. Rd.	0.00	0.17	0.17	4.70	P	A	U		B	1671
"	NCC 1671	Gen. M. Dr.	L/K. Rd.	0.17	0.33	0.16	4.70	U(G)	A	U		B	1671
1672. Gen. Mathenge Dr.	NCC 1672	R/R. PKL	L/K. Rd.	0.00	2.17	2.17	6.10	P	D	U		F	1672
1673. Gen. Mathenge Cl.	NCC 1673	Gen. M. Dr.	End	0.00	0.10	0.10	2.50	U(G)	C	U		B	1673
1674. Gen. Mathenge Dr.	NCC 1674	Kab. Rd.	Mpaka Rd.	0.00	0.41	0.41	5.50	P		U		B	1674
1675. Gen. Mathenge Ln.	NCC 1675	G. M. Dr.	D/S. Av.	0.00	0.26	0.26	4.00	U(E)	A	U		B	1675
1676. Getathuru Road	NCC 1676	City/B	Nge. Rd.	0.00	2.38	2.38	6.10	P	A	U	M	B	1676
1677. Gigiri Road	NCC 1677	P/H. Rd.	Lim. Rd.	0.00	1.17	1.17	4.00	P	L	U		B	1677
1678. Githuri Road	NCC 1678	Wan. Rd.	Tree Rd.	0.00	0.43	0.43	5.55	P	A	U		B	1678
1679. Gtuamba Road	NCC 1679	Gre. Gr.	Kyuna Rd	0.00	0.70	0.70	5.30	P	L	U		B	1679
1680. Grevillia Grove	NCC 1680	Mug. Gr.	Gitu. Rd.	0.00	0.61	0.61	4.10	P	L	U		B	1680
1681. Happy Valley	NCC 1681	SV. Rd.	End	0.00	0.17	0.17	4.50	P	C	U		B	1681

TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

AREA: Nairobi      ZONE: Westland      GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1682. Hill View Close	NCC 1682	L/K. Rd	End	0.00	0.32	0.32	5.30	P	C	U		B	1682
1683. Hill View Crsc.	NCC 1683	S/V. Rd.	End	0.00	0.54	0.54	5.30	P	C	U		B	1683
1684. Hill View Rise	NCC 1684	H/V. Crsc.	Cross Rd	0.00	0.31	0.31	4.95	P		U		B	1684
1685. Iregi Road	NCC 1685	5th Pkls	Wang. Rd.	0.00	0.48	0.48	6.60	P	A	U		B	1685
1686. Ita Road	NCC 1686	1st Pkls	2nd Pkls	0.00	0.29	0.29	5.43	P	A	U		B	1686
1687. Kabete Lane	NCC 1687	G/M Dr.	L/W. Rd.	0.00	0.30	0.30	4.00	U(G)		U		B	1687
1688. Karuna Close	NCC 1688	Sch. Ln.	End	0.00	0.34	0.34	5.50	P	C	U		B	1688
1689. Karuna Road	NCC 1689	Wai. Way	L/W. Rd.	0.00	0.43	0.43	5.50	P	D	U		B	1689
1690. Kazkazi Lane	NCC 1690	Muth. Rd.	Mugo. Rd.	0.00	0.08	0.08	4.00	U(E)	A	U		B	1690
1691. Kedai Close	NCC 1691	Lore. Crs.	End	0.00	0.11	0.11	4.36	P	C	U		B	1691
1692. Kiambu Close	NCC 1692	O/K. Rd.	End	0.00	0.11	0.11	2.90	P	C	U		B	1692
1693. Kiambu Road	NCC 1693	Muth. R/A.	Kbu/B	0.00	5.43	5.43	6.70	P	L	U		B	1693
1694. Kibagare Valley	NCC 1694	Lore. RG.	End	0.00	0.92	0.92	3.30	P	C	U		B	1694
1695. Kitisuru Road	NCC 1695	For CL	Pepo. Rd.	0.00	3.68	3.68	4.70	P	D	U		B	1695
1696. Kusi Lane	NCC 1696	3rd Pkls	4th Pkl.	0.00	0.51	0.51	4.00	U(E)	A	U		B	1696
1697. Kyuna Close	NCC 1697	Kyuna Rd	End	0.00	0.27	0.27	4.60	P	C	U		B	1697
1698. Kyuna Crescent	NCC 1698	Git. Rd.	End	0.00	1.41	1.41	5.50	P	C	U		B	1698
1699. Kyuna Lane	NCC 1699	Kyuna Rd	End	0.00	0.13	0.13	4.00	U(G)	C	U		B	1699
1700. Kyuna Rise	NCC 1700	Kaba Ln.	Gitu. Rd	0.00	0.16	0.16	5.70	P		U		B	1700
1701. Kyuna Road (1)	NCC 1701	L/K. Rd	Lore. Rg	0.00	1.59	1.59	4.50	P	D	U		B	1701
1702. Kyuna Road (2)	NCC 1702	L/K. Rd	Lore. Rg	1.59	2.13	0.54	4.50	P	D	U		B	1702
1703. Lake View Rd. (pt.1)	NCC 1703	Cross Rd.	End	0.00	0.71	0.71	5.60	P	C	U		B	1703
1704. Lake View Rd. (pt.2)	NCC 1704	L/V. Rd. 1	Nge. Rd.	0.00	0.46	0.46	5.30	P		U		B	1704
1705. Limuru Rd (pt.1)	NCC 1705	Embassy	Ruaka Rd.	0.00	1.70	1.70	5.30	P	P	U	B	B	1705
1706. Limuru Rd. (pt.2)	NCC 1706	Ruak. Rd.	Muth. Rd.	1.70	6.53	4.83	6.30	P	P	U	B	B	1706
1707. Limuru Rd. (pt.3)	NCC 1707			6.53	9.77	3.24	8.02	P	P	U	B	B	1707
1708. Loresho Close	NCC 1708	Lore. Crs.	End	0.00	0.24	0.24	3.95	P	C	U		B	1708
1709. Loresho Crescent	NCC 1709	Lore. Rg.	Lore. Rg	0.00	1.43	1.43	5.15	P	D	U		B	1709
1710. Loresho Grove	NCC 1710	Lore. Crs.	End	0.00	0.50	0.50	4.90	P	C	U		B	1710
1711. Loresho Ridge	NCC 1711	Kabe. Uni.	L/K. Rd.	0.00	4.02	4.02	5.63	P	L	U		B	1711
1712. Loresho Rise	NCC 1712	Lore. Crs.	End	0.00	0.29	0.29	4.70	P	C	U		F	1712
1713. Loresho Vale	NCC 1713	Lore. Crs.	End	0.00	0.17	0.17	3.95	P	C	U		F	1713
1714. Lower Kabete Rd. 1	NCC 1714	R/R. Pkl.	Lore. Rg	0.00	3.30	3.30	6.00	P	D	U	B	B	1714

TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

ROAD INVENTORY

AREA: Nairobi

ZONE: Westland

GIBB AFRICA

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1715. Lower Kabete Rd. 2	NCC 1715	R/R. Pkl	Lore. Rg.	3.30	8.99	5.69	5.89	P	D	U	B	B	1715
1716. Magumo Close	NCC 1716	Magu. Crs.	End	0.00	0.06	0.06	5.00	P	C	U		B	1716
1717. Magumo Crescent	NCC 1717	Kyuna Rd.	Kyuna Rd.	0.00	0.79	0.79	5.00	P	L	U		B	1717
1718. Makuba Lane	NCC 1718	Lore. Crs.	End	0.00	0.22	0.22	4.20	P	C	U		B	1718
1719. Maratha Close	NCC 1719	Mar. Rd.	1st Pkls	0.00	0.14	0.14	5.00	P	A	U		F	1719
1720. Matundu Lane	NCC 1720	Bro. Gr.	Sch. Ln.	0.00	0.39	0.39	5.60	P	A	U		B	1720
1721. Mazari Road	NCC 1721	Wai. Way	Tree Rd.	0.00	1.29	1.29	6.75	P	A	U		B	1721
1722. Mbweha Lane	NCC 1722	Muth. Rd.	Ojjo Rd.	0.00	0.14	0.14	4.00	U(E)	A	U		B	1722
1723. Mogotio Road	NCC 1723	Wai. Way	Chi. Ln.	0.00	0.40	0.40	4.40	P	A	U		B	1723
"	NCC 1723	Wai. Way	Chi. Ln.	0.40	0.66	0.26	4.40	U(E)	A	U		B	1723
1724. Moran Road	NCC 1724	1st Pkls	2nd Pkls	0.00	0.10	0.10	4.00	P	A	U		B	1724
1725. Mpaka Road (pt.1)	NCC 1725	1st Pkls	Ngao Rd.	0.00	0.22	0.22	7.00	P	L	U		F	1725
1726. Mpaka Road (pt.2)	NCC 1726	Wai. Way	V/O. Sch.	0.00	0.50	0.50	7.37	P	L	U		B	1726
"	NCC 1726	Wai. Way	V/O. Sch.	0.50	0.77	0.27	7.37	U(E)	L	U		B	1726
1727. Mpaka Road (pt.3)	NCC 1727	Chi. Rd.	Wai. Way	0.00	0.45	0.45	5.20	P		U		B	1727
1728. Mpenzi Lane	NCC 1728	Muth. Rd.	Mogo. Rd.	0.00	0.19	0.19	4.00	U(E)	A	U		B	1728
1729. Mpenzi Lane	NCC 1729	Muth. Rd.	Mogo. Rd.	0.00	0.05	0.05	4.00	U(E)		U		B	1729
1730. Msapo Close	NCC 1730	Wai. Way	End	0.00	0.18	0.18	4.00	U(E)	C	U		B	1730
"	NCC 1731	Wai. Way	End	0.00	0.15	0.15	4.00	U(E)	C	U		B	1731
1732. Mtama Road	NCC 1732	3rd Pkls	6th. Pkl	0.00	0.62	0.62	4.00	P		U		B	1732
1733. Mua Park Close	NCC 1733	M/P. Rd.	End	0.00	0.11	0.11	5.30	U(E)	C	U		B	1733
1734. Mua Park Lane	NCC 1734	M/P. Rd.	End	0.00	1.00	1.00	4.36	P	C	U		B	1734
1735. Mua Park Road	NCC 1735	Sere. Av.	O/K. Rd.	0.00	0.64	0.64	5.30	P	A	U		B	1735
1736. Muguga Green	NCC 1736	Brook Gr.	Brook Gds.	0.00	0.75	0.75	5.60	P	A	U		B	1736
"	NCC 1736	Brook Gr.	Brook Gds.	0.75	0.92	0.17	5.60	U(G)	A	U		B	1736
1737. Muguga Grove	NCC 1737	Brook Dr.	Mugu. Gr.	0.00	0.19	0.19	6.90	P	A	U		B	1737
1738. Muhugu Road	NCC 1738	Pkl. Rd.	Fore. Rd.	0.00	0.26	0.26	10.60	P	L	U		B	1738
1739. Mukinduri Close	NCC 1739	Muth. Rd.	End	0.00	0.09	0.09	4.80	P	C	U		B	1739
1740. Mukinduri Road	NCC 1740	West Rd.	Mogo. Rd.	0.00	0.30	0.30	4.70	P	L	U		B	1740
1741. Mukui Road	NCC 1741	M/C. Rd.	Muhu. Rd.	0.00	0.16	0.16	5.60	P	A	U		F	1741
1742. Mutati Road	NCC 1742	Kusi. Rd.	Masa. Rd.	0.00	0.10	0.10	4.00	P	A	U		B	1742
"	NCC 1742	Kusi. Rd.	Masa. Rd.	0.10	0.38	0.28	4.00	U(E)	A	U		B	1742
1743. Muthaiga Close	NCC 1743	Muth. Rd.	End	0.00	0.24	0.24	4.00	P	C	U		B	1743

TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

AREA: Nairobi

ZONE: Westland

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1744. Muthaiga Crescent	NCC 1744	Muth. Rd.	End	0.00	0.28	0.28	4.70	P	C	U		B	1744
1745. Muthaiga Lane	NCC 1745	Muth. Rd.	End	0.00	0.14	0.14	4.90	P	C	U		B	1745
1746. Muthaiga Rise	NCC 1746	Muth. Rd.	End	0.00	0.13	0.13	4.00	U(E)	C	U		B	1746
1747. Muthaiga Road	NCC 1747	Limu. Rd.	Thika Rd.	0.00	1.74	1.74	6.65	P	D	U	B	F	1747
1748. Muthithi Road	NCC 1748	Mpaka Rd.	Muse. Hill	0.00	1.55	1.55	5.40	P	L	U	M	F	1748
1749. Mutundu Close	NCC 1749	Mutu. Rd.	End	0.00	0.09	0.09	4.00	U(E)	C	U		B	1749
1750. Mutundu Road	NCC 1750	Naiva. Rd.	Sere. Av.	0.00	0.62	0.62	4.90	P	D	U		B	1750
1751. Mwambao Road	NCC 1751	6th Pkls.	Limu. Rd.	0.00	0.30	0.30	5.66	P	A	U		F	1751
1752. Mwanzi Road (pt.1)	NCC 1752	R/R. Pkl	Peponi Rd.	0.00	0.41	0.41	4.95	P	A	U		F	1752
1753. Mwanzi Road (pt.2)	NCC 1753	R/R. Pkl	Peponi Rd.	0.41	0.81	0.81	4.95	U(E)	A	U		B	1753
1754. Mweiga Road	NCC 1754	Lore. Crs.	End	0.00	0.45	0.45	4.57	P	C	U		B	1754
1755. Naivasha Avenue	NCC 1755	Muth. Rd.	Mutu. Rd.	0.00	0.65	0.65	4.90	P	A	U		B	1755
1756. Ngao Road	NCC 1756	Mpaka Rd.	Kusi. Rd.	0.00	0.44	0.44	5.44	P	A	U		B	1756
1757. Ngecha Road (pt.1)	NCC 1757	L/K. Rd.	Peponi Rd.	0.00	3.19	3.19	5.68	P	A	U		F	1757
1758. Ngecha Road (pt.2)	NCC 1758	Peponi Rd	R/H. Rd.	0.00	2.04	2.04	3.30	P	A	U		B	1758
1759. Ojijo Lane	NCC 1759	Muth. Rd.	Ojijo Rd.	0.00	0.25	0.25	5.70	P	A	U		B	1759
1760. Ojijo Road	NCC 1760	Muse. Hill	Wai. Way	0.00	0.86	0.86	7.50	P	A	U		B	1760
1761. Old Kiambu Road	NCC 1761	M/P. Rd.	Forest Dr.	0.00	0.32	0.32	5.30	P		U		F	1761
"	NCC 1761	M/P. Rd.	Forest Dr.	0.32	0.80	0.48	5.30	U(E)		U		B	1761
1762. Orchard Close	NCC 1762	Muth. Rd.	End	0.00	0.24	0.24	4.00	P	C	U		F	1762
"	NCC 1762	Muth. Rd.	End	0.24	0.35	0.11	4.00	U(E)	C	U		B	1762
1763. Othelo Lane	NCC 1763	Muth. Rd.	End	0.00	0.25	0.25	6.15	P	C	U		F	1763
1764. Parklands Road	NCC 1764	Muse. Hill	Limu. Rd.	0.00	2.58	2.58	9.10	P	D	U		F	1764
1765. Peponi Close	NCC 1765	Peponi Rd	End	0.00	0.12	0.12	3.00	P	C	U		F	1765
1766. Peponi Grove	NCC 1766	Peponi Rd	End	0.00	0.13	0.13	5.50	P	C	U		F	1766
1767. Peponi Road	NCC 1767	Nge. Rd.	L/K. Rd.	0.00	4.66	4.66	5.75	P	A	U		F	1767
1768. Plums Lane	NCC 1768	Muth. Rd.	Ojijo Rd.	0.00	0.14	0.14	4.30	P	A	U		F	1768
1769. Red Hill Road (1)	NCC 1769	Limu. Rd.	Karu. Mkt.	0.00	1.56	1.56	8.35	P	L	U	B	F	1769
1770. Red Hill Road (2)	NCC 1770	Limu. Rd.	Karu. Mkt.	1.56	3.15	1.59	8.35	P		U	B	F	1770
1771. Ring Road Parklands	NCC 1771	Kabe. Rd.	M/N. Rd.	0.00	1.26	1.26	5.30	P	P	U		F	1771
"	NCC 1771	Kabe. Rd.	M/N. Rd.	1.26	1.36	0.10	5.30	U(E)	P	U		B	1771
1772. Rosslyn Close	NCC 1772	R/H. Rd.	End	0.00	0.25	0.25	3.50	P	C	U		F	1772
1773. Rosslyn Tree Homes	NCC 1773	Limu. Rd.	End	0.00	1.91	1.91	4.30	P	C	U		F	1773

TABLE 4.3-4 (12) ROAD INVENTORY IN WESTLAND

AREA: Nairobi

ZONE: Westland

GIBB AFRICA

ROAD INVENTORY

Road name or number	Unique road code ABC (abcd)	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	Urban or Rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)							
1774. Ruaka Lane	NCC 1774	Rua. Rd.	Cof. Fac.	0.00	0.25	0.25	P	C	U		F	1774
1775. Ruaka Drive	NCC 1775	Rua. Rd.	End	0.00	0.53	0.53	P	C	U		F	1775
1776. Ruaka Grove	NCC 1776	Rua. Rd.	Runda Dr.	0.00	0.49	0.49	P	A	U		F	1776
1777. Ruaka Road	NCC 1777	Limu. Rd.	End (T)	0.00	2.07	2.07	P	C	U	B	F	1777
1778. Runda Close 'B'	NCC 1778	Run. Rd.	End	0.00	0.54	0.54	P	C	U		F	1778
1779. Runda Drive	NCC 1779	Rua. Dr.	Rd. N	0.00	1.63	1.63	P	A	U		F	1779
1780. Runda Est. Rd. Q	NCC 1780	Run. Dr.	End	0.00	0.20	0.20	P	C	U		F	1780
1781. Runda Grove 'C'	NCC 1781	Run. Rd.	End	0.00	1.80	1.80	P	C	U		F	1781
1782. Runda Road 'A'	NCC 1782	Rua. Rd.	End	0.00	0.87	0.87	P	C	U		F	1782
1783. School Lane	NCC 1783	Brook. Dr.	Karu. Rd.	0.00	1.05	1.05	P	A	U		F	1783
1784. Serengeti Avenue	NCC 1784	Muth. Rd.	Mutu. Rd.	0.00	0.62	0.62	P	A	U		F	1784
1785. Sergoit Lane	NCC 1785	Muth. Rd.	End	0.00	0.18	0.18	P	C	U		F	1785
1786. Shanzu Road	NCC 1786	L/K. Rd.	End	0.00	0.21	0.21	P	C	U		F	1786
"	NCC 1786	L/K. Rd.	End	0.21	0.88	0.67	U(G)	C	U		B	1786
1787. Shivachi Road	NCC 1787	Wai. Way	1st Pkls.	0.00	0.34	0.34	P	A	U		F	1787
1788. Sports Avenue	NCC 1788	Ojjo Rd.	Taari. Rd.	0.00	0.37	0.37	U(E)	A	U		B	1788
1789. Spring Valley Ridge	NCC 1789	SV. Rd.	End	0.00	0.20	0.20	U(G)	C	U		B	1789
1790. Spring Valley Close	NCC 1790	SV. Rd.	End	0.00	0.12	0.12	U(G)	C	U		B	1790
1791. Spring Valley Crsc.	NCC 1791	SV. Rd.	End	0.00	0.32	0.32	U(E)	C	U		B	1791
1792. Spring Valley Rd.	NCC 1792	Peponi Rd	L/K. Rd.	0.00	2.64	2.64	P	A	U	M	B	1792
1793. Suswa Road	NCC 1793	Mpaka Rd.	Kusi Ln.	0.00	0.46	0.46	U(E)	L	U		B	1793
1794. Taarifa Lane	NCC 1794	Taar. Rd.	End	0.00	0.24	0.24	U(E)	C	U		B	1794
1795. Taarifa Road	NCC 1795	Wai. Way	Fore. Rd.	0.00	0.57	0.57	P	D	U		F	1795
1796. Tate Close	NCC 1796	City / B	Kiti. Rd.	0.00	0.80	0.80	P	D	U		F	1796
1797. Tchui Close	NCC 1797	Tchui Rd.	End	0.00	0.16	0.16	P	C	U		F	1797
1798. Tchui Road	NCC 1798	Sere. Av.	End	0.00	1.03	1.03	P	C	U		F	1798
1799. The Crescent	NCC 1799	Pkls. Rd.	Pkls. Rd.	0.00	0.52	0.52	P	A	U		F	1799
1800. Thigiri Close	NCC 1800	T/R. Rd.	End	0.00	0.47	0.47	P	C	U		F	1800
1801. Thigiri Garden	NCC 1801	T/R. Rd.	End	0.00	0.46	0.46	P	C	U		F	1801
1802. Thigiri Grove	NCC 1802	T/R. Rd.	End	0.00	0.46	0.46	P	C	U		F	1802
1803. Thigiri Lane	NCC 1803	T/R. Rd.	Karu. For.	0.00	0.46	0.46	P	A	U		F	1803
1804. Thigiri Ridge	NCC 1804	R/H. Rd.	Pepo. Rd.	0.00	2.18	2.18	P	D	U		F	1804
1805. Thigiri Rise	NCC 1805	T/R. Rd.	R/H. Rd.	0.00	0.23	0.23	P	A	U		F	1805



TABLE 4.3-4 (13) ROAD INVENTORY IN NAIROBI

ROAD INVENTORY

AREA: Nairobi

ZONE: Nairobi

GIBB AFRICA

Road name or number	Unique ROAD CODE	Section or link description		Section or link chainage (km) (x.xx)		Section or link length (km) (x.x)	Ave. Width (m) (x.x)	Road type (paved/unpaved) (P/U)	Road Class (H/P/D/L/A/C)	urban or rural (U/R)	Public Transport Route (B/M/T)	Carriageway Condition B/F/G	Sheet no.
		Start (from)	End (to)	Start (from)	End (to)								
1820. Shimo la Tewa Rd.	NCC 1820	Lusaka Rd.	End	0.00	0.31	0.31	3.30	P	C	U		F	1820
1821. Mwea Rd.	NCC 1821	Ngiri Rd.	Njiwa Rd.	0.00	0.18	0.18	6.00	P	L	U		F	1821
1822. Maseno Rd.	NCC 1822	Ngiri Rd.	Njiwa Rd.	0.00	0.17	0.17	5.00	P	A	U		B	1822
1823. Eburru Rd.	NCC 1823	Ngiri Rd.	Njiwa Rd.	0.00	0.12	0.12	4.00	P	L	U		B	1823
1824. Menengai Rd.	NCC 1824	Hosp Rd.	Hosp Rd.	0.00	0.40	0.40	5.00	P	L	U		B	1824
1825. Jabavu Lane	NCC 1825	Jabavu Rd.	Arg. Kod Rd.	0.00	0.18	0.18	4.00	P	A	U		F	1825
1826. Mfududu Street	NCC 1826	Ole Sin Rd.	Eldo Rd.	0.00	0.37	0.37	6.30	P	L	U		F	1826
1827. Kajiado Lane	NCC 1827	Bahati CRC	Mbale Rd.	0.00	0.32	0.32	4.30		A	U		F	1827
1828. Dami Lane	NCC 1828	Bahati CRC	Mbale Rd.	0.00	0.28	0.28	6.30		A	U		F	1828
1829. Kiu Lane	NCC 1829	Kajiado Ln.	Kitui Ln	0.00	0.11	0.11	6.00		A	U		F	1829
1830. Ulu Road	NCC 1830	Uaso Rd.	Rukwa Rd.	0.00	0.21	0.21	4.00		A	U		F	1830
1831. Gitanga Grove	NCC 1831	Gitanga Rd.	End	0.00	0.36	0.36	4.80		C	U		F	1831
1832. Macharia Road.	NCC 1832	Naiv. Rd.	KAW Rd. G	0.00	1.65	1.65	6.50		D	U		F	1832
1833. Jairo Owino Street	NCC 1833	Quarry Rd.	Kiny St.	0.00	0.28	0.28	6.30	P	A	U	M	F	1833
1834. Mumias Street	NCC 1834	Kiny St.	End	0.00	0.18	0.18	6.30		C	U	T	B	1834
1835. Muga Street	NCC 1835	Kiny St.	R. Course Rd.	0.00	0.14	0.14	5.50		A	U		B	1835
1836. Hatheru Road	NCC 1836	Gitanga Rd.	End	0.00	0.85	0.85	3.80		C	U	M	B	1836
1837. Korongo Road 1	NCC 1837	Kor Ln.	End	0.00	0.17	0.17	3.20		C	U		B	1837
1838. Korongo CRC	NCC 1838	Kor Rd.	Kor Rd.	0.00	0.24	0.24	6.00		A	U		B	1838
1839. Korongo Close	NCC 1839	Kor Rd.	Kor Rd.	0.00	0.26	0.26	6.00	P	A	U		B	1839
1840. Slip Road	NCC 1840	Univ. Way	R/About	0.00	0.18	0.18	6.00	P	C	U		F	1840
1841. Ngenda Road	NCC 1841	Kil Rd.	Ngiri Rd.	0.00	0.31	0.31	6.00	P	A	U		F	1841
1842. Muhori Road	NCC 1842	Kikuyu Rd.	Namai Rd.	0.00	4.88	4.88	6.00	P	A	U		F	1842
1843. Sanaka Road	NCC 1843	2nd Pkld Av.	1st Pkld Av.	0.00	0.25	0.25	6.80	P	A	U		B	1843
1844. Siona Road	NCC 1844	Okoth A. Rd.	Mura Rd.	0.00	0.12	0.12	6.00	P	A	U		F	1844
1845. Ashok Lane	NCC 1845	2nd Pkld Av.	Sanaka Rd.	0.00	0.22	0.22	5.80	P	C	U		F	1845
1846. Twiga Road	NCC 1846	Karura Av.	End	0.00	0.26	0.26	6.50	P	A	U		F	1846
1847. Karura Avenue	NCC 1847	Limuru Rd.	End	0.00	0.71	0.71	6.00	U(E)	C	U		F	1847
1848. Arwin Close	NCC 1848	Mwangi Rd.	End	0.00	0.84	0.84	6.20	P	C	U		F	1848
1849. Arwin CRC	NCC 1849	Arwin Cls.	Arwin Cls.	0.00	0.52	0.52	4.00	U(G)	C	U		F	1849
1850. Mtumbiri Close	NCC 1850	Sore Rd.	End	0.00	0.18	0.18	3.50	P	C	U		F	1850
1851. Magadi Road	NCC 1851			0.00			4.50	U(E)		U		B	1851
1852. Amboseli Lane	NCC 1852	Ambo. Rd.	End	0.00	0.38	0.38	6.50	U(E)		U		B	1852

TABLE 4.3-5 INVENTORY OF MULTIPLE LANE ROAD IN NAIROBI

	Road Name	Start point	End point	No. of Carriageways	No. of Lanes /carriageway	Total No. of Lanes
	<b>Nairobi CBD</b>					
1	Chiromo road	Museum hill	Waiyaki Way	2	3	6
2	City Hall way	Moi Avenue	Uhuru Highway	2	2	4
3	Haile Selasie	Landhies Road	Uhuru Highway	2	3	6
4	Haile Selasie	Uhuru Highway	Ngong road	2	2	4
5	Harambee Avenue	Moi Avenue	Uhuru Highway	2	2	4
6	Kenyatta Avenue	Moi Avenue	Posta Road	2	2	4
7	Kenyatta Avenue	Posta Road	Uhuru Highway	2	3	6
8	Kimathi Street	Mama Ngina street	Tubman road	2	2	4
9	Koinange street	University Way	Kenyatta Avenue	2	2	4
10	Landhies Rd	Jogoo Road	Haile Selasie	2	3	6
11	Loita Street	Kenyatta Avenue	Monrovia street	2	2	4
12	Moi Avenue	University Way	Haile Selasie	2	2	4
13	Parliament road	Haile Selasie	Kenyatta Avenue	2	2	4
14	Ronald Ngala	Moi Avenue	River road	2	2	4
15	Taifa Road	City Hall Way	Harambee Avenue	2	2	4
16	Uhuru Highway	Museum hill	Lusaka road	2	3	6
17	University Way	Uhuru Highway Junction	Slip road Junction	2	3	6
18	University Way	Slip road Junction	Miundi Mbingu	2	2	4
19	Racecourse Road	Haile Selasie	Waruingi street	2	2	4
	<b>Surrounding Areas including Urbanised Area</b>					
20	Enterprise road	Lusaka road	Funzi road	2	2	4
21	Forest Road	Limuru road	Muranga road	2	3	6
22	Jogoo Road	Landhies Road	Likoni Road Junction	2	3	6
23	Jogoo Road	Likoni Road Junction	Outer Ring road	2	2	4
24	Juja road	Ring road Ngara	Muratina street	2	2	4
25	Langata Road	Uhuru Highway Junction	Kungu Karumba Junction	2	2	4
26	Lusaka Road	Jogoo Road	Enterprise road	2	3	6
27	Mbagathi way	Langata road	Ngong road	2	3	6
28	Mombasa Road	Lusaka road	JKIA	2	2	4
29	Muranga road	Moi Avenue	Ring road Ngara	2	2	4
30	Muranga road	Ring road Ngara	Thika road	2	3	6
31	Ngara road	Museum hill	Racecourse Road	2	2	4
32	Ngong road(town bound)	Third Ngong Avenue	Fifth Ngong Avenue	1	3	3
33	Ring Road Pumwani	Racecourse Road	Landhies Road	2	3	6
34	Thika road	Muranga road	Metro Boundary	2	2	4
35	Valley Road	Milimani Road	Argwings Kodhek	2	2	4
36	Waiyaki Way	Ring Road Westlands	Metro Boundary	2	3	6



**TABLE 4.3-6 BRIDGE INVENTORY IN STUDY AREA**

STRUCNUM	DISTRICT	ROADNUM	SECTNUM	MATERIAL	CROSSTYPE	LENGTH	WIDTH	NUMSPANS	HORIZCLEAR	VERTCLEAR	APPROACH SURFTYPE	APPROACH SURFCOND	REMARKS
519	Kajiado	A104	1	Masonry	Waterway	24.2	8.3	5	8.3	0	Surface Dressing	Fair	
523	Kajiado	D523	1	PreStrs Concrete	Waterway	16.0	7.8	1	7.2	5	Surface Dressing	Poor	
524	Kajiado	D523	1	PreStrs Concrete	Waterway	30.8	7.8	2	7.2	4.7	Surface Dressing	Poor	
525	Kajiado	D523	1	PreStrs Concrete	Waterway	11.0	8.0	1	7.1	3.9	Surface Dressing	Poor	
526	Kajiado	D523	1	PreStrs Concrete	Waterway	13.4	7.8	1	7.1	4.4	Surface Dressing	Poor	
515	Kajiado	E1493	1	PreStrs Concrete	Waterway	10.0	4.0	2	4.05	3	Gravel	Fair	
516	Kajiado	E1495	1	PreStrs Concrete	Waterway	12.9	7.8	1	7.8	2.9	Gravel	Fair	
517	Kajiado	E1495	1	Bailey	Waterway	21.8	3.4	1	3.7	4.6	Gravel	Poor	
440	Kiambu	A104	1	PreStrs Concrete	Pedestrian	4.0	20.0	1	7.5	2.7	Premix		
435	Kiambu	A104	1	PreStrs Concrete	Railway	35.3	20.0	1	7.5	5.8	Premix		
436	Kiambu	A104	1	PreStrs Concrete	Road	5.0	20.0	1	7.5	5.5	Premix		
437	Kiambu	A104	1	PreStrs Concrete	Road	34.3	20.0	1	7.5	5.5	Premix		
439	Kiambu	A104	1	PreStrs Concrete	Pedestrian	4.0	20.0	1	7.5	2.7	Premix		
441	Kiambu	A104	1	PreStrs Concrete	Road	34.3	20.0	1	7.5	5.5	Premix		
442	Kiambu	A104	1	PreStrs Concrete	Pedestrian	25.0	3.0	1	8.5	5.8	Premix		
438	Kiambu	A104	1	PreStrs Concrete	Pedestrian	4.0	20.0	1	7.5	3.7	Premix		
432	Kiambu	A104	2	PreStrs Concrete	Road	40.0	11.6	1	11.1	4.5	Premix		
424	Kiambu	A104	2	PreStrs Concrete	Road	25.0	4.8	1	12	2.7	Premix		
425	Kiambu	A104	2	PreStrs Concrete	Pedestrian	25.0	2.5	1	10	5.5	Premix		
426	Kiambu	A104	2	PreStrs Concrete	Road	34.3	16.6	1	7.5	3.4	Premix		
427	Kiambu	A104	2	PreStrs Concrete	Pedestrian	4.0	20.0	1	9.7	2.7	Premix		
428	Kiambu	A104	2	PreStrs Concrete	Railway	46.0	20.0	1	7.6	5.1	Premix		
429	Kiambu	A104	2	PreStrs Concrete	Road	33.9	20.0	1	14	5.5	Premix		
431	Kiambu	A104	2	PreStrs Concrete	Road	4.0	20.0	1	7.5	5.5	Premix		
430	Kiambu	A104	2	PreStrs Concrete	Road	34.3	20.0	1	7.5	5.5	Premix		
450	Kiambu	A104	3	PreStrs Concrete	Road	4.0	7.0	1	11.5	2.7	Premix		
451	Kiambu	A104	3	PreStrs Concrete	Road	4.0	12.0	1	11.5	2.7	Premix		
392	Kiambu	C63	1	Steel	Railway	13.6	5.0	1	7.1	5.7	Surface Dressing		
390	Kiambu	C63	1	Steel	Railway	8.2	10.2	1	9.2	5.4	Surface Dressing		
391	Kiambu	C63	1	PreStrs Concrete	Road	20.5	4.0	4	14.1	5.8	Surface Dressing		
457	Kiambu	C63	2	PreStrs Concrete	Road	34.3	20.0	1	7.5	5.5	Surface Dressing		
456	Kiambu	C63	3	Masonry	Waterway	9.3	6.2	1	6.2	5.7	Surface Dressing		
458	Kiambu	C63	4	PreStrs Concrete	Waterway	9.3	8.5	1	7.9	2	Surface Dressing		
394	Kiambu	C64	1	Steel	Waterway	8.5	7.9	1	7.2	3.5	Premix		
405	Kiambu	D403	1	PreStrs Concrete	Waterway	7.3	6.7	1	6.1	2	Surface Dressing		
399	Kiambu	D404	1	Steel	Waterway	8.1	8.1	1	8.1	2	Surface Dressing		
406	Kiambu	D407	1	Steel	Railway	9.3	4.1	1	8.8	4	Premix		
407	Kiambu	D407	1	Steel	Waterway	9.0	8.2	1	7.8	4	Premix		
408	Kiambu	D407	2	Steel	Waterway	7.6	7.6	1	7.1	2.5	Premix		
414	Kiambu	D408	1	Steel	Waterway	5.5	6.8	1	6.2	2.8	Surface Dressing		
393	Kiambu	D409	2	PreStrs Concrete	Pedestrian	28.5	4.5	2	14	5.7	Surface Dressing		
460	Kiambu	D409	2	PreStrs Concrete	Road	41.2	9.2	3	8.1	5.6	Surface Dressing		
409	Kiambu	D410	1	Masonry	Railway	9.6	5.6	1	7.3	3	Gravel		
434	Kiambu	D410	1	PreStrs Concrete	Road	5.0	20.0	1	7.5	5.5	Surface Dressing		
411	Kiambu	E426	1	PreStrs Concrete	Waterway	4.7	3.6	1	3.1	1.1	Surface Dressing		
314	Machakos	A104	1			0.0	0.0	5	0	0	Premix	Good	
313	Machakos	A104	1			0.0	0.0	3	0	0	Premix	Good	
284	Machakos	A109	1			0.0	0.0	0	0	0	Premix	Good	
286	Machakos	A109	1			0.0	0.0	0	0	0	Premix	Good	
285	Machakos	A109	1			0.0	0.0	0	0	0	Premix	Good	
272	Machakos	A109	2			0.0	0.0	7	0	0	Premix	Fair	
271	Machakos	A109	2			0.0	0.0	3	0	0	Premix	Fair	
275	Machakos	A109	2			0.0	0.0	0	0	0	Premix	Fair	
274	Machakos	A109	2			0.0	0.0	0	0	0	Premix	Fair	
273	Machakos	A109	2			0.0	0.0	0	0	0	Premix	Fair	
287	Machakos	C98	1			0.0	0.0	0	0	0	Premix	Good	
288	Machakos	C98	1			0.0	0.0	0	0	0	Premix	Good	
292	Machakos	D520	1			0.0	0.0	0	0	0	Gravel	Poor	
295	Machakos	D521	1			0.0	0.0	0	0	0	Gravel	Poor	
293	Machakos	D521	1			0.0	0.0	9	0	0	Gravel	Poor	
294	Machakos	D521	1			0.0	0.0	0	0	0	Gravel	Poor	

**TABLE 4.3-6 BRIDGE INVENTORY IN STUDY AREA**

STRUCNUM	DISTRICT	ROADNUM	SECTNUM	MATERIAL	CROSSTYPE	LENGTH	WIDTH	NUMSPANS	HORIZCLEAR	VERTCLEAR	APPROACH SURFTYPE	APPROACH SURFCOND	REMARKS
297	Machakos	D521	1			0.0	0.0	0	0	0	Gravel	Poor	
296	Machakos	D521	1			0.0	0.0	0	0	0	Gravel	Fair	
291	Machakos	E483	1			0.0	0.0	2	0	0	Gravel	Good	
1877	Thika	A2	1	PreStrs Concrete	Railway	19.6	10.2	3	9.6	5.5	Premix	Fair	
1844	Thika	A2	1	PreStrs Concrete	Pedestrian	45.6	2.4	2	2.2	6.2	Premix	Fair	
1837	Thika	A2	1	PreStrs Concrete	Railway	29.0	9.9	3	9.9	5.3	Premix	Good	
1876	Thika	A2	1	Steel	Waterway	11.6	10.3	2	10	5.3	Premix	Fair	
1889	Thika	A2	2	PreStrs Concrete	Road	4.0	19.8	1	9	2.1	Premix	Fair	
1886	Thika	A2	2	PreStrs Concrete	Waterway	10.3	8.0	1	8	4	Premix	Fair	
1888	Thika	A2	2	Steel	Waterway	23.4	20.0	1	9.6	3.5	Premix	Fair	
1890	Thika	A2	2	PreStrs Concrete	Railway	30.9	19.2	1	8.9	6.6	Premix	Fair	
1891	Thika	A2	2	PreStrs Concrete	Railway	19.2	19.0	1	8.8	6.2	Premix	Fair	
1887	Thika	A2	2	PreStrs Concrete	Railway	9.5	18.4	1	8.6	6.8	Premix	Fair	
1846	Thika	A2	3	PreStrs Concrete	Waterway	31.7	19.4	1	9.5	5.1	Premix	Excellent	
1893	Thika	A2	3	PreStrs Concrete	Waterway	17.5	18.4	1	8.9	4.5	Premix	Fair	
1894	Thika	A3	2	PreStrs Concrete	Road	53.0	9.2	4	8.2	5.7	Premix	Good	
1828	Thika	C63	1	PreStrs Concrete	Waterway	8.4	7.5	1	7.5	3.5	Surface Dressing	Poor	
1879	Thika	C63	3	PreStrs Concrete	Waterway	40.7	9.1	2	8.3	4.7	Premix	Good	
1878	Thika	C63	3	PreStrs Concrete	Road	104.0	9.2	4	8.4	5.7	Premix	Good	
1861	Thika	C65	1	Steel	Waterway	9.2	8.5	1	8.5	2	Surface Dressing	Good	
1892	Thika	C67	3	PreStrs Concrete	Road	29.5	9.7	1	9	5.5	Premix	Fair	
1830	Thika	D398	2	PreStrs Concrete	Waterway	7.8	7.4	1	7.4	3.2	Surface Dressing	Fair	
1829	Thika	D399	1	Steel	Waterway	9.6	4.5	1	4.5	5	Gravel	Fair	
1859	Thika	D399	2	PreStrs Concrete	Waterway	15.9	7.6	1	7.6	3	Surface Dressing	Fair	
1880	Thika	D424	1	Steel	Waterway	30.0	5.4	3	5.4	3.9	Gravel	Fair	
1883	Thika	D521	1	Steel	Waterway	92.7	4.9	9	4.9	4	Gravel	Fair	
1882	Thika	D521	1	Steel	Waterway	8.0	4.9	1	4.9	3.9	Gravel	Fair	
1884	Thika	D521	2	Steel	Waterway	8.1	5.3	1	5.3	1.8	Gravel	Fair	
1847	Thika	E1535	1	PreStrs Concrete	Road	32.5	12.2	2	11	5.8	Premix	Good	
1838	Thika	E1535	1	Bailey	Waterway	18.4	3.9	1	3.85	3.8	Gravel	Poor	
1868	Thika	E1591	1	Bailey	Waterway	30.0	3.2	2	3.2	2.9	Earth	Fair	
1848	Thika	E1598	1	PreStrs Concrete	Waterway	37.5	8.8	3	8.8	5.3	Surface Dressing	Poor	
1840	Thika	E503	1	Steel	Waterway	18.0	4.3	2	4.3	3.7	Gravel	Fair	

TABLE 4.3-7 SUMMARY OF BRIDGE INVENTORY IN NAIROBI CITY

Sheet No.	Nairobi Area		GPS Reading	Type	Length	No. of Spans	Bride width	Super struct	Sub struct	Condition of Approach	
	Name of Road	Bridge name								x	y
1	Peponi	Mathare	9861692	255363	Concrete	6.0	1	10.4	fair	fair	poor
2	Jogoo	Railway	9856626	264482	Steel	21.4	1	24.6	fair	fair	good
3	Jogoo	Footbridge	9857039	260040	Steel	34.5	2	1.85	fair	fair	N/A
4	Jogoo	Footbridge	9856604	262088	Steel	26.8	2	1.85	fair	fair	N/A
5	Outer ring	Railway	9859058	264312	Concrete	30.4	3	8.9	fair	fair	fair
6	Outer ring	Ngong River Bridge	9855523	265141	Concrete	39.5	4	9.4	bad	bad	poor/narrow
7	Outer ring	Mathare river	9861795	263904	Concrete	29.4	3	9.3	very bad	very bad	bad
8	Outer ring	Nairobi Rvr	9860161	264038	Concrete	30.4	3	9.3	bad	bad	settling
9	Komarock	Stream nr Swamp	9861012	266313	Box Culvert	10.5	1-cell	7	fair	fair	good
10	Komarock	Nairobi Rvr	9860419	264384	Concrete	20.7	1	11.5	fair	fair	good
11	Juja Road	Sch. Ft brd	9859515	259364	Steel	27.2	2	27.2	fair	fair	N/A
12	Limuru Road	River	9859799	257656	Box Culvert	17.8	2-cell	9.3	fair	fair	bad
13	Thika Rd	Nairobi Rvr	9860268	259520	Concrete	18.4	1	26.5	fair	fair	fair
14	Race course rd	Nairobi Rvr	9858275	258783	Concrete	19.2	1	24.3	bad	bad	fair
15	Pumwani Rd	Nairobi Rvr	9857826	259217	Concrete	8.3	1	14.5	bad	bad	bad
16	Lamu Rd	Nairobi Rvr	9851642	260151	Concrete	9.0	1	12	bad	fair	bad
17	First Ave. Eastleigh	Nairobi Rvr	9857383	261004	Concrete	14.6	3	11.5	bad	fair	bad
18	Mtadadu Ave.	Nairobi Rvr	9857947	262023	Concrete	17.5	1	10	fair	fair	bad
19	Mbagathi	Footbridge	9854943	255871	Concrete	34.8	3	2.6	fair	fair	N/A
20	Mbagathi	Nairobi Rvr	9854561	256270	Concrete	24.8	2	8.5	bad	bad	bad
21	Ring road Pumwani	Nairobi Rvr	9858153	258903	Concrete	13.3	1	22.4	bad	bad	good
22	Langata Rd	Box culvert	9852033	252328	Box Culvert	15.5	1	10.8	bad	bad	Poor
23	MombasaRd/Uhuru Highway	Footbridge	9855594	258180	Concrete	32.05	2	3	good	good	N/A
24	Uhuru Highway/Mesa Rd	Footbridge	9856733	257643	Concrete	22.4	2	3	fair	fair	N/A
25	Waiyaki Way	Overpass	9859030	256547	Concrete	14.05	1	18.5	fair	fair	good
26	Muranga/Thika Rd	Nairobi Rvr RHS	9858540	257619	Concrete	18.7	3	17.7	fair	fair	good
27	Museum Hill Rd	Nairobi Rvr RHS	9859028	256605	Concrete	14.05	1	10.9	Fair	Fair	good
28	Langata Rd	Ngong River FtBridge	9854939	257088	Concrete	11.5	1	4	fair	fair	good
29	Langata Rd	Ngong River(LHS)	9854940	957081	Concrete	12.0	2	10.9	fair	fair	good
30	Langata Rd	Ngong River(RHS)	9854948	257070	Concrete	12.0	2	10	fair	fair	good
31	Langata Rd	Footbridge (Pedestriann)	9855359	257353	Concrete	27.1	2	3	good	good	N/A
32	Limuru Road	Gitathuru River	9862057	256911	Concrete	12.0	1	7	fair	fair	poor
33	Limuru Road	Mathare river	9861337	257581	Box Culvert	10.0	arch	7	fair	fair	fair
34	Ngong Rd	box culvert	985338	243259	Box Culvert	8.0	1	5	bad	bad	bad
35	Thika Rd	conc. deck/steel beam	9860819	260884	Concrete	15.0	1	7	fair	fair	good
36	Muranga/Thika Rd	Nairobi river bridge	9858629	257515	Concrete	15.0	1	11	fair	fair	paved
37	Lower Kabete Rd	Mathare river	9862025	252800	Concrete	9.0	1	5	fair	fair	Too Narrow

TABLE 4.3-8 MAJOR CULVERT INVENTORY IN NAIROBI CITY

Sheet No.	Nairobi Area		Type	Length	No. of Spans	C/way width	Super struct	Sub struct	Conditio
	Name of Road	Bridge name							
									LH
1	Peponi	Cutathuru Rvr	9861092 255363 1712	14.0	-	-	fair	fair	-
2	Peponi	Mutundu Rvr	9862785 254341 1712	10.8	-	-	fair	fair	-
3	Peponi	Canulized Rvr	9860961 255419 1710	10.2	-	-	fair	fair	-
4	Ngecha	Thigiri Rvr	9863887 253007 1730	16.6	-	-	fair	fair	-
5	Thigiri ridge	Thigiri Rvr	9863535 254552 1727	7.0	-	-	fair	fair	-
6	Thigiri ridge	Mutundu Rvr	9862468 254361 1700	6.7	-	-	fair	fair	-
7	Lower Kabete	Canalised Rvr	9861124 254908 1718	20.8	-	-	fair	fair	-
8	Kyuna Crescent	Canalised Rvr	9861400 251789 1755	17.0	-	-	fair	fair	-
9	Ngecha	Cutathuru Rvr	9863010 250840 1759	14.7	-	-	fair	fair	-
10	Ngecha	Mutundu Rvr	9863358 251998 1756	22.0	-	-	fair	fair	-

# **APPENDIX 5**

## **PUBLIC TRANSPORT**

	<b>Page</b>
<b>5.1 PUBLIC TRANSPORT MODES</b>	<b>A5-1</b>
<b>5.2 MODE INTERCHANGE AREA</b>	<b>A5-8</b>

## APPENDIX 5 PUBLIC TRANSPORT

### 5.1 PUBLIC TRANSPORT MODES

#### 5.1.1 Bus and Matatu

##### (1) History

Kenya Bus Service (KBS) started operations in 1934 as a subsidiary of Overseas Motor Transport Company Ltd. of London (OMT). Thirteen buses on 12 routes served the Nairobi population, which then amounted to 50,000 and carried 660,000 passengers during the first year. In 1951 the company was taken over by United Transport Overseas Ltd. (UTO) and in 1966 the Nairobi City Council acquired 25% of the company's shares. In the late 1980s the policy decision of UTO to discontinue operations created a crisis. This was solved when Stagecoach Ltd. of Scotland took over UTO's shares in 1992 and the company was renamed Stagecoach Kenya Bus. The latest change was in 1998, when Stagecoach sold the company to a group of Kenyan investors, who changed the company's name back to Kenya Bus Service (KBS).

Matatu was originally started in 1960s as illegal public transport by private undertaking. When the matatu system was legalized in 1973, the establishment of new routes was in principle freely done. Government policy was that it would assist small, hard-working enterprise to make a living beside the big business represented by a dominant bus company. Soon, however, syndicates emerged, not to operate matatu but to profit from those who did. Today, most matatu routes are controlled by loosely composed "associations" who act as self-appointed "owners" of the route. The vehicles themselves are owned by individual investors, normally not drivers. Table 5.1-1 shows brief history of public transport in Nairobi.

**TABLE 5.1-1 BRIEF HISTORY OF PUBLIC TRANSPORT IN NAIROBI**

Year	Description
1934	Kenya Bus Service (KBS) initiated as a subsidiary of Overseas Motor Transport Company Ltd. Of London (OMT).
1951	KBS taken over by United Transport Overseas Ltd. Of London (UTO).
1960s	Matatus operated illegally as pirates.
1966	25% of KBS shares acquired by Nairobi City Council.
1973	Matatus legalized. Market share insignificant.
1982	Matatus Vehicle Owners Association formed.
1986	Limited commuter rail service started.
1988	National Youth Service (NYS) starts bus operations
1989	Matatus Vehicle Owners Association dissolved.
1992	Establishment of Nyayo Bus Service Corporation (NBSC). UTO shares in KBS taken over by Stagecoach of Scotland.
1995	Stagecoach Kenya Bus formed.
1997	Liquidation of Nyayo Bus Service Corporation
1998	Stagecoach KBS market share down to 50%. Stagecoach KBS fare increase and staff reduction. Stagecoach KBS sold the company to a group of Kenyan investors. Company's name changed back to Kenya Bus Service (KBS)

Source: Nairobi Long Term Transport Study

## **(2) Operational Characteristics (and Fares)**

There are 175 routes (50 bus routes and 125 matatu routes) and a fleet of 12,376 buses and matatus. Of this fleet number, approximately 12,000 are matatus and 78% of them are small, 14-seater matatus, which are main contributors of the traffic congestion in Nairobi. Total daily passengers of bus and matatu are approximately 830,000.

KBS is a private company that had some 266 large buses (61 seated passengers) on fixed routes and time tables in 2003. Most routes they operate on are radial, passing through the city center. This reduces the need for passenger transfers and provides a competitive advantage over the matatus, which are permitted only to enter the city center along main peripheral roads.

KBS split the companies into two: KBS and Bus Truck Company. KBS now offers two services: Express service (new buses) which is for inter city transport, mainly to Western Kenya; and the Metro Shuttle minibus that serves the high/medium income levels in Nairobi. The Bus Truck Company offers city transport, and is now the main competitor with matatus. (See Photo 5.1-1)

Matatu mostly operates on the same routes as Kenya Bus Service, but without timetables. They are of two main types: the 14- and 25-seater vehicles. On some routes such as north-south routes, they compete among themselves. (See Photo 5.1-2)

There is no fixed fare system for the matatu. Matatu fares depend on the time of the day and the weather conditions. The fares were higher during peak hours, late at night and during bad weathers until a few years ago. Nowadays, the fare sometimes is lower during peak hours due to the many competitors to the matatu business. But fares are still high late at night and during bad weathers.

Matatu largely ignores official bus stops especially in peak hours. They depart from the terminal only when fully occupied and generally drive non-stop to the final destination. In off-peak periods, drivers try to pick up as many passengers as possible on the way, which leads to erratic driving and stopping behavior. During congested periods, traffic rules are often ignored (e.g. they use the road shoulders or lanes for opposing traffic to by-pass traffic jams).



PHOTO 5.1-1 BUS TRACK AND METRO SHUTTLE AT CITY HALL WAY BUS STOP



PHOTO 5.1-2 BIG AND SMALL MATATUS ALONG HAILE SELASSIE AVE.





**PHOTO 5.1-3 TUK TUK WAITING PASSENGERS AT KENYATTA AVE./KIMATHI LANE**



**PHOTO 5.1-4 CYCLE TAXI IN THIKA**



**PHOTO 5.1-5 FIVE-THIRTY COMMUTER TRAIN BOUND FOR THIKA**



**PHOTO 5.1-6 DANDORA STATION**

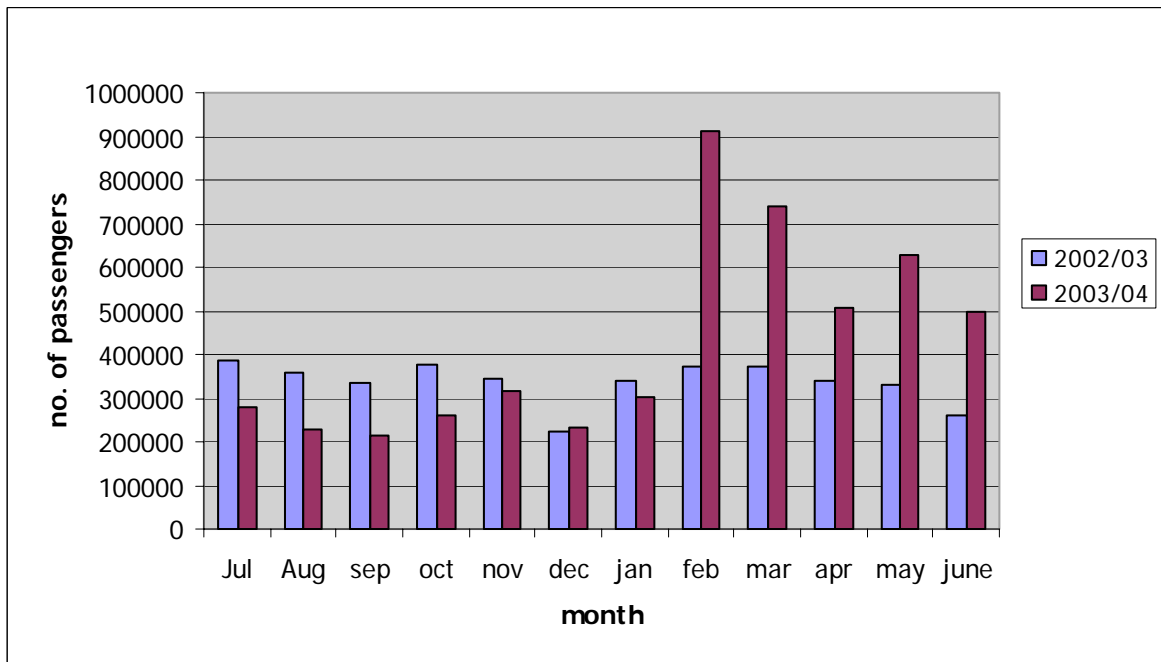


FIGURE 5.1-7 COMMUTER PASSENGER TREND

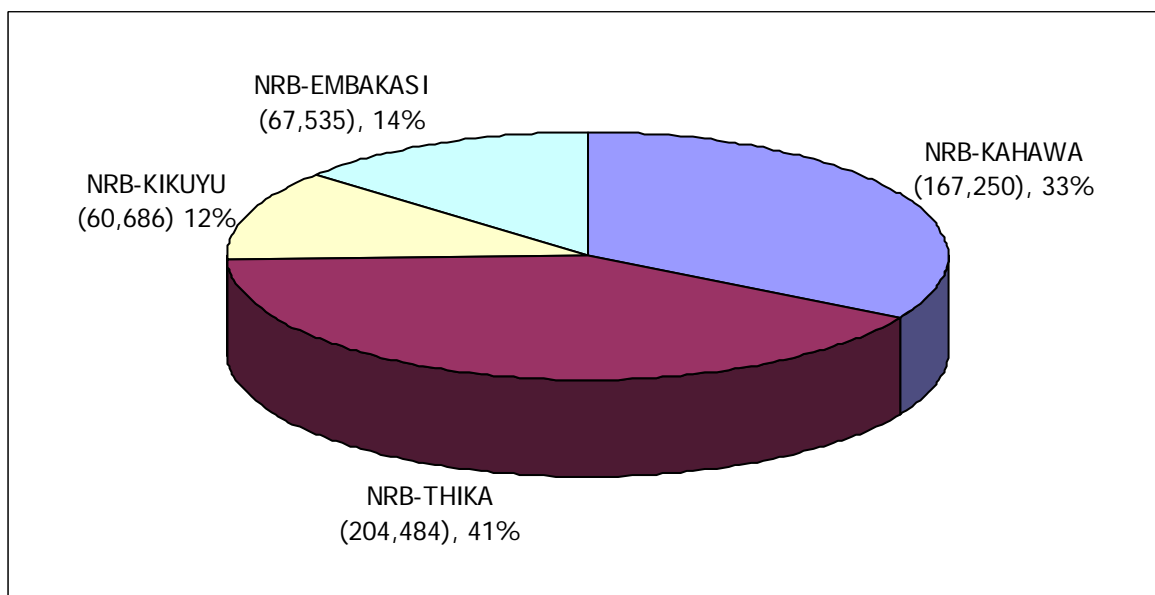


FIGURE 5.1-8 COMMUTER PASSENGER BY LINE

### 5.1.2 Air Transport

The trends of annual air passengers and air freight of Nairobi International Airport from 1997 to 2002 are shown in Figures 5.1-9 and Table 5.1-2. Air passengers and air freight in 2002 reached approximately 3 million and 170 tonnes, respectively. Annual growth rates of air passengers and air freight are 3.7% and 17.0%, respectively. The trend of air freight is more remarkable than that of air passenger.

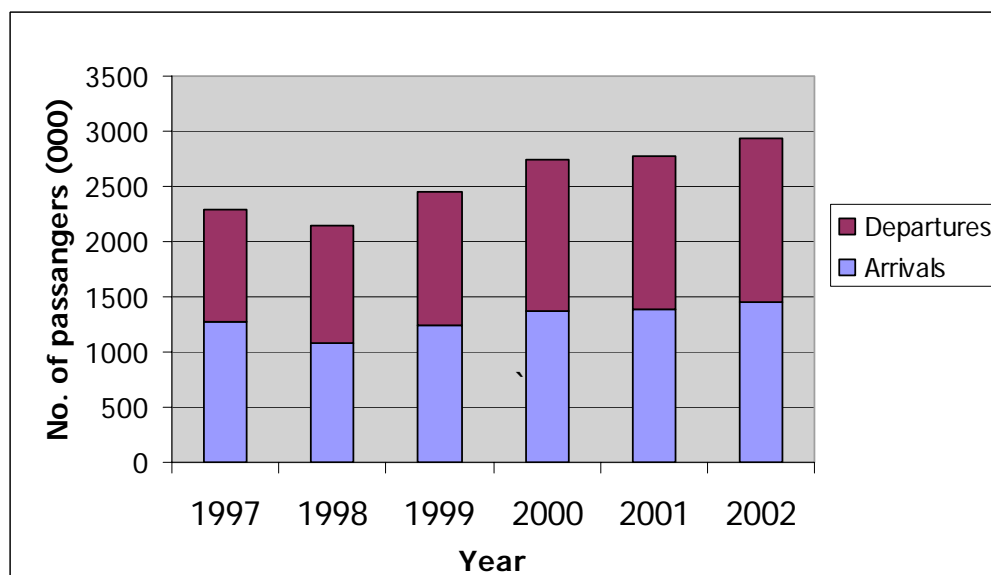


FIGURE 5.1-9 AIR PASSENGER TREND

TABLE 5.1-2 TREND OF AIR PASSENGER AND AIR FREIGHT

(Unit: passengers - 000 No.)

	1997	1998	1999	2000	2001	2002
<b>Arrivals</b>	1275	1087	1248	1376	1383	1458
<b>Departures</b>	1022	1051	1205	1358	1399	1472
<b>In transit</b>	254	211	215	211	187	127
<b>Total</b>	2551	2350	2668	2945	2968	3057

(Unit: 000 tonnes)

	1997	1998	1999	2000	2001	2002
<b>Cargo: Unloaded</b>	28521	39538	31183	37918	40161	45419
<b>Loaded</b>	47169	76747	94369	101702	98986	123385
<b>Mail: Unloaded</b>	1108	911	734	728	292	96
<b>Loaded</b>	435	479	335	296	173	109
<b>Total</b>	77232	117674	126621	140643	139612	169009

## 5.2 MODE INTERCHANGE AREA

One of the disadvantages of public transport modes is the transfer to other modes. The transfer, which generates at mode interchange areas such as railway stations and bus terminals, force such inconvenience as waiting time and walking between modes; therefore, one of the most important issues to improve the public transport system is the development of smooth transfer at mode interchange areas.

Nairobi Railway Station and Bus Truck terminal in the city center are the typical mode interchange areas in the Nairobi Metropolitan Area (See Photo 5.2-1).

The Nairobi Railway Station is the central railway station in the capital of Kenya and there is enough space for the station plaza. However, the station plaza is occupied only as matatus terminal. It is not effectively used as a mode interchange area.

The Bus Truck terminal in the city center is well developed as a mode interchange area; however, heavy traffic congestion is observed at the terminal's narrow entrance and exit points. There are also many matatu terminals around this terminal (See Photo 5.2-1). The location of the five studied town is shown in Photo 5.2-2.



**PHOTO 5.2-1 NAIROBI RAILWAY STATION**



PHOTO 5.2-2 LOCATION OF STUDIED FIVE TOWNS

# **APPENDIX 6**

## **TRAFFIC MANAGEMENT**

	<b>Page</b>
<b>6.1 TRAFFIC MANAGEMENT ADMINISTRATION</b>	<b>A6-1</b>
<b>6.2 TRAFFIC SAFETY ANALYSIS REGULATION</b>	<b>A6-2</b>

## APPENDIX 6 TRAFFIC MANAGEMENT

### 6.1 TRAFFIC MANAGEMENT ADMINISTRATION

It is important to maintain the urban environment by improving urban transport. However, to keep the smooth traffic flow by optimizing the use of the road infrastructure in the city centre of Nairobi is difficult due to the increasing volume of traffic and limited expansion of transport infrastructure. The most effective measures to cope with this situation are traffic management, such as traffic signal control and car parking policies.

Table 6.1-1 shows the matrix between the types of traffic management and related administrations. For example, the traffic safety education involves many agencies and organizations. However, the actual activities such as traffic safety campaign are being done individually. If these campaigns are conducted based on the comprehensive programme, it will create a much greater impact to the public. And it is obvious that the role of the local governments is wide in terms of the traffic management.

**TABLE 6.1-1 TRAFFIC MANAGEMENT ADMINISTRATION**

Items	Ministry of Roads & Public Works	Ministry of Transport	Ministry of Health	Ministry of Education, Science & Technology	Council		Traffic Police		Private Stakeholders (KERSA)
					Nairobi City	Other Towns	Nairobi City	Other Towns	
Traffic Management Policy									
Traffic Laws and Regulations									
Traffic Signal									
Traffic Management System such as One-way System									
Traffic Signage									
Road Marking									
Car Parking Control									
Road Traffic Safety									

Note

1. Private Stakeholders: Public Transport Operators, Business Associations and Private Sectors, etc.
2. : Contribute to the process but not responsible in regulation and implementation
3. Road Traffic Safety includes Traffic Accident Data Collection & Processing and Traffic Safety Campaign & Education
4. KERSA: Kenya Private Sector Advocacy Group



## 6.2 TRAFFIC SAFETY ANALYSIS REGULATION

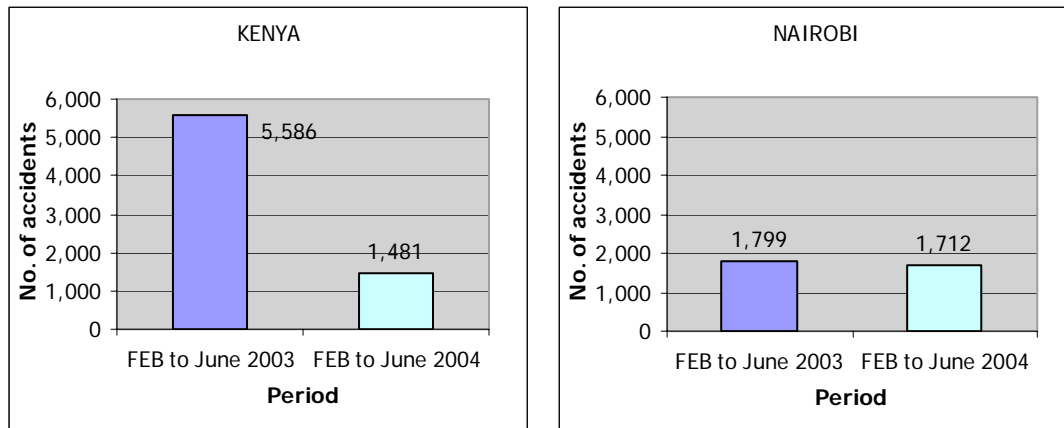
Figure 6.2-7 shows the comparison of number of accidents before (2003) and after (2004) matatu regulation started in February 2004. The comparison period is five months from February to June in 2003 and 2004; the graph on the left shows the nationwide figures and the one on the right shows the figures for Nairobi.

These graphs show that traffic accidents in whole of Kenya drastically decreased; on the other hand, traffic accidents in Nairobi did not much changed. This could mean that the maximum driving speed regulation of 80 km/hr has more effect to the intercity routes.

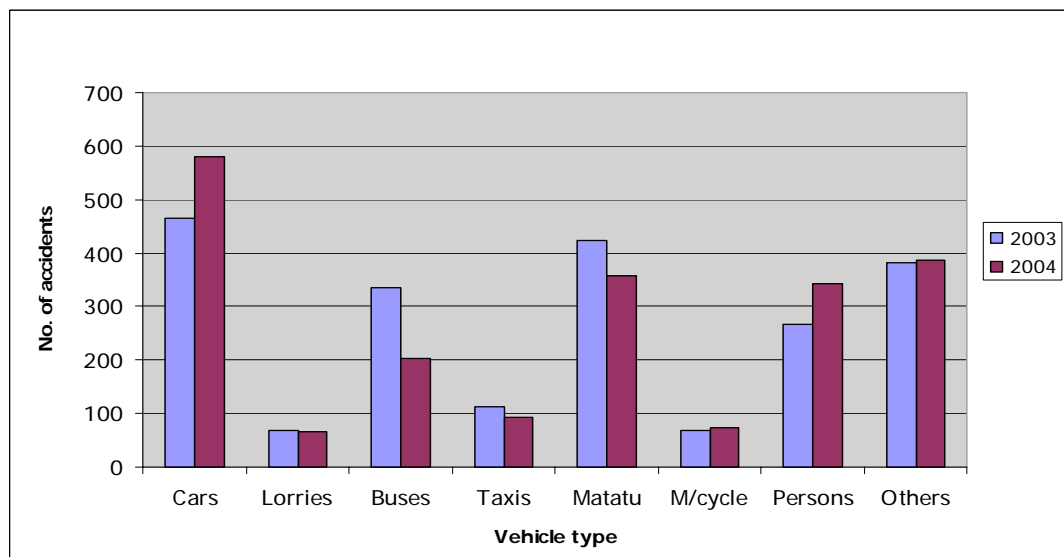
Figure 6.2-3 shows the vehicle involvement before and after matatu regulation in Nairobi. The number of matatu-involving accidents decreased because of the matatu regulation; however, the number of accidents involving private cars increased. This shows that it is necessary to introduce more drastic traffic safety measures into Nairobi.



**PHOTO 6.2-1 MUINDI MBINGU ST.**



**FIGURE 6.2-2 COMPARISON OF NUMBER OF ACCIDENTS BEFORE (2003) AND AFTER (2004) MATATU REGULATION**



**FIGURE 6.2-3 COMPARISON OF VEHICLE TYPES INVOLVED IN ACCIDENTS BEFORE (2003) AND AFTER (2004) MATATU REGULATION IN NAIROBI**

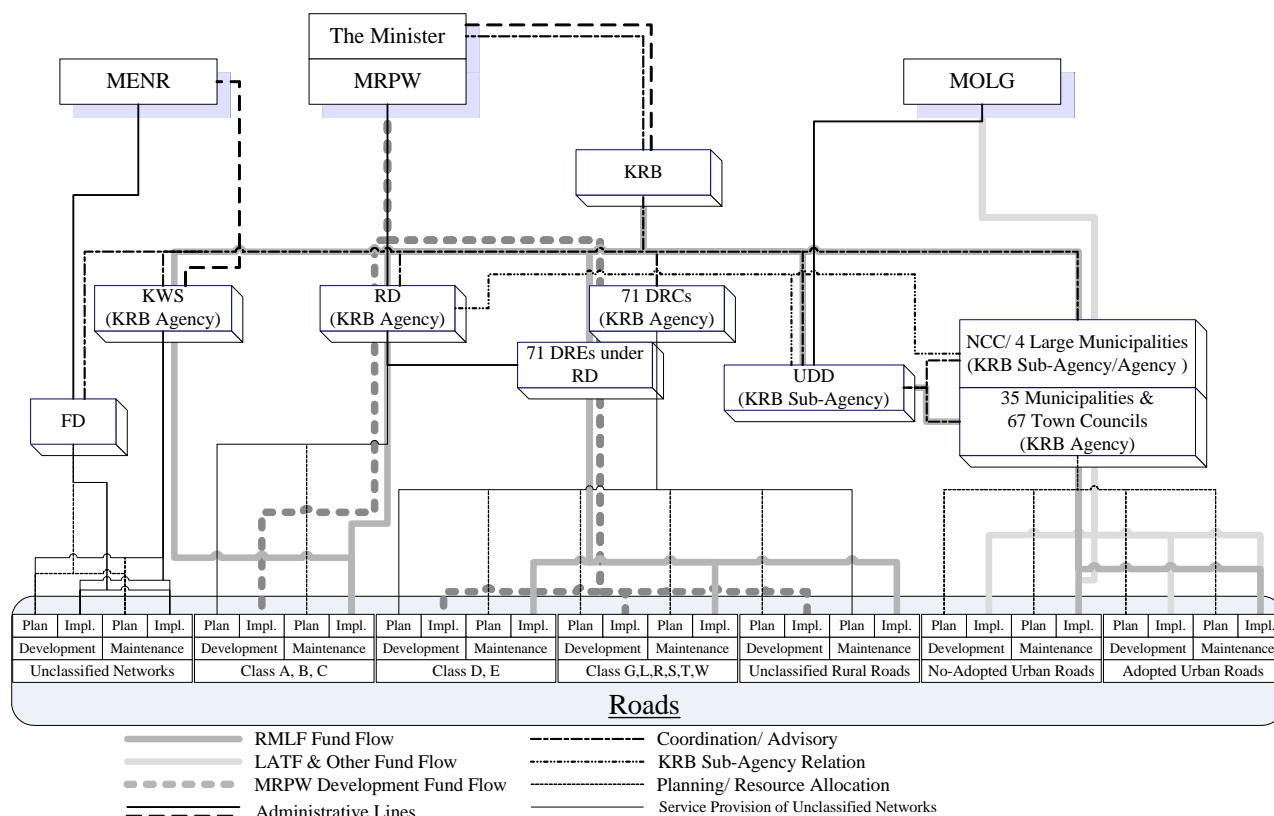
# **APPENDIX 7**

## **ORGANIZATION**

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## APPENDIX 7 ORGANIZATION

### 7.1 INSTITUTIONAL STRUCTURE AND FUNCTIONS



**FIGURE 7.1-1 RELATIONSHIP OF MAIN PLAYERS AND FLOWS OF MAJOR FUNDS IN ROAD SECTOR**

### 7.2 ROAD SECTOR ADMINISTRATION

#### 7.2.1 The Ministry of Road and Public Works (MRPW) and the Roads Department (RD)

##### (1) MRPW

In March 2004, MRPW succeeded the road sector responsibilities as the key central government agency for road maintenance, rehabilitation and construction of national trunk roads after the governmental restructuring.

MRPW is in nature a governmental road engineering implementing agency. Currently, MRPW consists of two systems: one is the service supporting system under the Central Services Departments and the other is road business system mainly under RD with the Mechanical and Transport Department (MTD).

RD is the largest department in MRPW which accounts for approximately 80% of the total turnover of the Ministry. MTD, with 294 staff, mainly provides maintenance plant and equipment through its organizational system in provinces and districts: the Provincial Mechanical Engineer and District Mechanical Engineer are in charge of workshop and of maintenance of all the plant and equipment at the provincial and district levels. The level of services seems very poor in terms of both the availability and utilization of equipment. Currently the MRPW is carrying out an institutional reform programme including the reform of MTD.

The main responsibilities and core businesses of the road business system are as following:

- Ensure cost effective designs for roads, bridge, airports, aerodromes and other civil engineering structures;
- Ensure quality control during construction, maintenance and rehabilitation of all works
- Avail reliable vehicle, plant and equipment;
- Develop and improve mechanical workshops to serve as plant pools and inspection centres for vehicle road worthiness;
- Maintain existing main road network in the country;
- Develop and effectively manage sufficiently robust road system that will require minimum maintenance; and
- Use of machinery and labor intensive techniques to promote employment and income earnings.

## **(2) RD**

RD is headed by Chief Engineer who reports to the Permanent Secretary (PS) through an Engineer-in-Chief (EIC). RD is responsible for planning, design, construction, improvement, operation and maintenance of the classified road in Kenya. RD has four branches namely Planning, Development, Maintenance and Technical Administration. All of them are headed by Principal Superintending Engineers (PSE) who report to the Chief Engineer. Within the branches, there are 7 units which are headed by a Chief Superintending Engineers (CSE).

Following the establishment of the KRB, functions of RD mainly cover the management of classes A, B and C of road network. These functions include the development (planning, design and construction), operation and maintenance of the classified road network. The functions of RD including its units are described briefly in Table 7.2-1.

**TABLE 7.2-1 THE FUNCTIONS OF RD AND ITS UNITS**

No	Units	Functions
01	Planning	01 Overall planning and programming of long and short term road projects.
		02 Monitoring on-going projects/ programs and preparing appropriate reports.
		03 Review and analysis of national road policy for efficient utilization of existing infrastructure.
		04 Liaison with government ministries, organisations and development partners on planning and implementation of road projects.
		05 Providing policy and planning guidance on roads.
		06 Ensuring that environmental and social concerns are integrated in road works.
		07 Ensuring routine maintenance of roads is carried out in a manner benign to road development.
		08 Formulation and preparation of environmental manuals, standards and guidelines for the road sector.
		09 Providing policy and planning guidelines for road programs.
02	Design	10 Co-ordination of extra-ordinary activities such as emergency road repairs and disaster responses, and liaison with other GOK departments, NGO's and other agencies on environmental and social programmes.
		01 Survey, design and tender documentation for road projects.
		02 Formulation and preparation of standards and design manuals.
		03 Dealing with matters related to road reserves and control of access to all classified roads.
		04 Management of drawing office and survey unit.
		05 Maintaining the register of road engineering consultants and contractors.
03	Bridge	06 Liaison with the road design consultants, materials branch and other organizations and agencies on matters related to road design.
		01 The design of bridges, updating of bridge design manuals and specifications, preparation and sustenance of bridge inventory and condition survey.
		02 Supervision of construction and maintenance of bridges.
04	Construction	03 Preparation of bridge programs, budget and progress reports.
		01 Administration of road works contracts both major improvements and rehabilitation of roads.
		02 Preparation of estimates and contract documents for resealing and recarpeting of classified bitumen roads.
		03 Preparation of monthly and quarterly reports.
		04 Liaison with donors on all donor funded construction projects.
		05 Liaison with government departments for smooth running of projects.
05	Maintenance	06 Processing of contractor's and consultant's payments.
		01 Maintenance of all class A, B and C classified roads (paved and unpaved).
		02 Overall planning, budgeting and co-ordination of the activities of the maintenance (A, B and C roads).
		03 Setting objectives and monitoring the performance on the maintenance of A, B and C roads.
		04 Preparation of estimates and contract documents for small scale maintenance contracts.
		05 Coordinating Donor/ GOK funding allocation for Road 2000 Program.
		06 Promoting strategic objectives of Road 2000 Program.
06	Technical Administration	07 Liaison with GOK ministries and departments, other organizations and agencies on feeder roads.
		01 General administration and supervision of cleanliness in the department.
		02 Coordination of accident reports and briefs.
		03 Liaison with relevant government ministries, departments, organizations agencies (including donors) for professional and technical training for officers in the department.

		04 Overall coordination of Parliamentary questions.
		05 Coordination of axle load enforcement.
		06 Coordination of personnel (including staff disciplinary) and supplier matters in the department.
		07 Coordination of the management information system.
		08 Attending ministerial advisory.
07	Technical Compliance	01 Ensure that all projects are being implemented as per signed contracts.
		02 Check evaluation of claims by Chief Project Engineers before they are forwarded to Principal Supt. Engineer (Development).
		03 Check tender documents to ensure they are complete in all aspects.
		04 Check quality and quantity of work done by direct labor units to ensure there is value for money.
		05 Ensure that programmes approved by District Roads Committees are followed and that there is value for money for the works that are executed by District Roads Engineers.

RD's Provincial road maintenance organization operates through a number of in-house "resealing" or "strategic maintenance units" based either at PWOs or in road camps around the country. These units were initially set up to look after all aspects of paved road maintenance but now are so run down they do little more than basic patching or "emergency" maintenance. Much of the work done by these units is of poor quality.

RD has about 3,152 staff, of which 187 are in engineer posts, either in HQ, provinces or districts. This is translated allocation of one engineer for about every 340 km of classified network in the country, which is close to the optimum recommended by the World Bank (one engineer per 400 km).

Despite the good skill levels of many RD staff, it seems that the current institutional environment which is characterized by lack of accountability and poor management structures prevents their potential from full realization. Senior staff at HQ and in the provinces are well trained and highly experienced. In the districts many engineers are degree or diploma holders trying to build up experience for eventual registration with IEK, and most of them have benefited from training delivered under programs such as MRP and now increasing Roads 2000.

## 7.2.2 Kenya Roads Board (KRB)

### (1) Overview

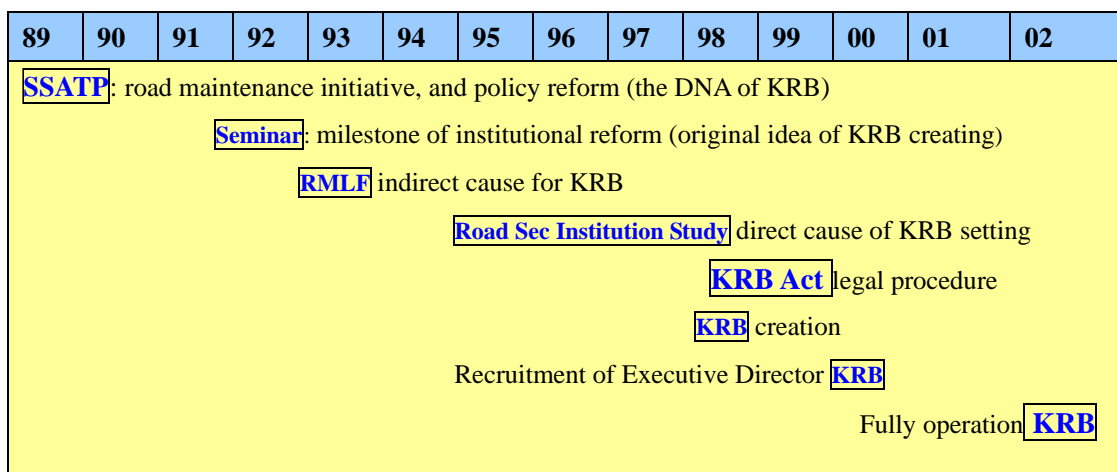
The establishment of the KRB in 1999 is a significant event in the Kenya's road sector. It is not only to prove a progress in institutional reform in the sector and to try to create an efficient and accountable organization for managing the RMLF, but also to build an institute to coordinate all the relating central and local governmental organizations in road infrastructure maintenance and development. The mandate of coordination given to KRB,

despite this function has not been effectively utilized for some reasons, created a new relationship structure in history of the Kenya’s road sector development.

Figure 7.2-2 shows institutional structure of road sector. KRB is responsible to the Minister of the MRPW, not to the MRPW itself. KRB is completely distinct organization from RD and is an autonomous organization administered by its Board of directors. Under KRB there are three road agencies of RD, DRCs and KWS, and RD’s sub-agencies consist of UDD with 42 Municipal Councils and 58 Town Councils, Nairobi City Council (CCN) and 4 large Municipal Councils. Through these agencies KRB keeps relationships with almost all the central and local governmental organizations relating to the road sector, e.g. relations with the MRPW through RD, relations with the MOLG through UDD, relations with the MENR through KWS, and relations with local authorities through DRCs. The Board members of KRB include five permanent secretaries from the MRPW, MOLG, MOT, MOF (Ministry of Finance), and MOFA (Ministry of Foreign Affairs). Other members of the Board are described in (3) of this Section. KRB has built up and been keeping a close relationship with similar organizations in the Southern Saharan African countries through the Southern Saharan African Transport Program (SSATP) of the World Bank and the African Road Maintenance Fund Association.

**(2) KRB’s Establishment: the Result of Road Sector Reform**

Figure 7.2-1 shows that the historical flow of the establishment of KRB originated from SSATP which took almost 10 years from birth of original idea of building a road fund to the establishment and operation of the fund management organization, KRB. KRB is a product of the road sector reform in Kenya. This reform has been facilitated by the international donors, particularly by the World Bank.



**FIGURE 7.2-1 ROAD OF KRB ESTABLISHMENT**



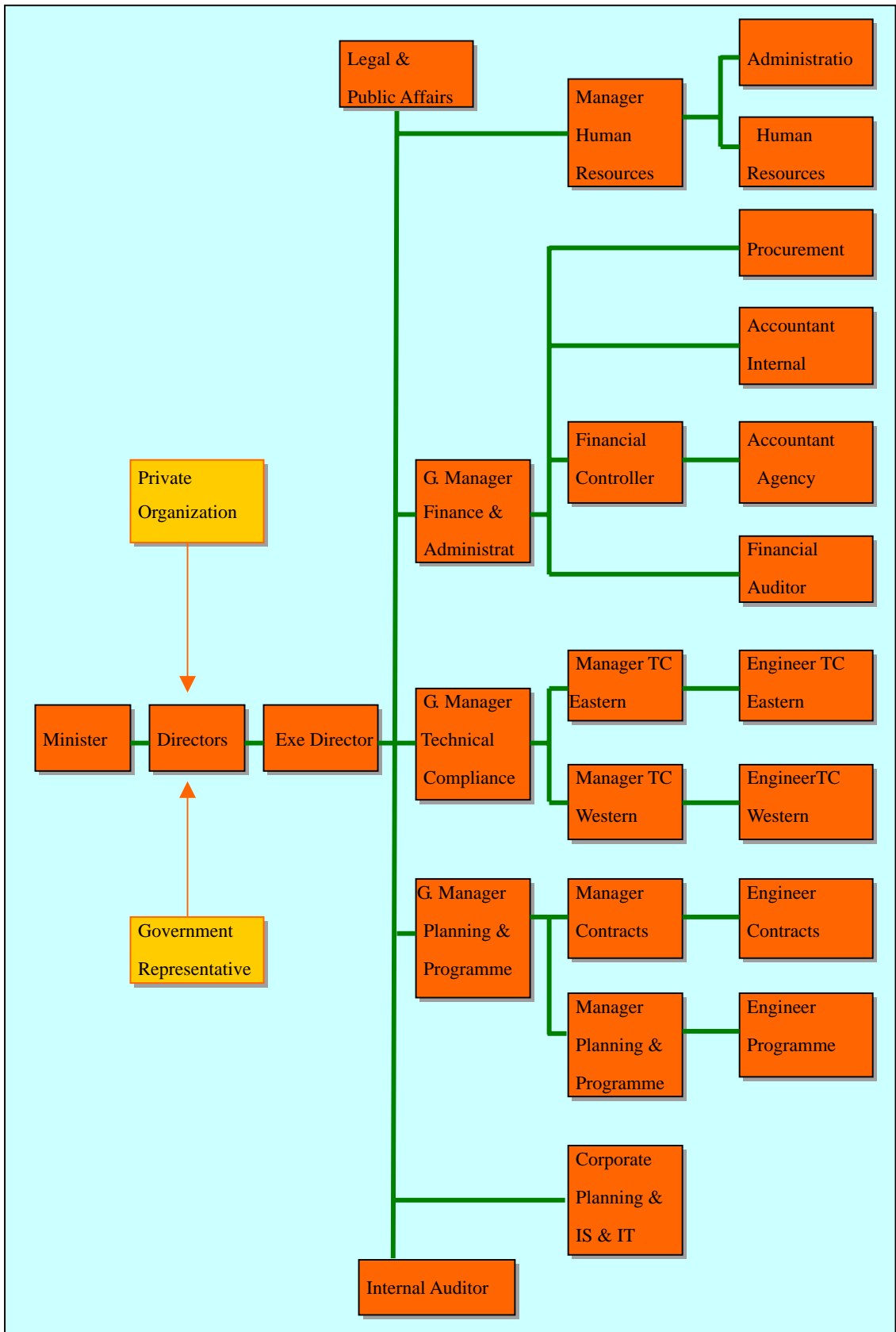


FIGURE 7.2-2 ORGANISATION STRUCTURE OF KRB

**(3) Organizational Structure (See Figure 7.2-2)**

KRB is not an executing agency which has direct responsibility for RMLF. This is potentially the strongest arrangement for fund management. In addition to the five members of the permanent secretaries of the Ministries, user side has five representatives on the Board from Automobile Association of Kenya (AAK), Association of Tour Operations, Kenyan Association of Manufacturers, Kenya Transport Association, and League of Women Voters. Furthermore, there are three other private sector representatives: Institution of Engineers of Kenya, and Institute of Surveyors of Kenya, and Institute of Certified Public Accountants of Kenya.

A bigger representation from the private sector is materialized by deliberation to secure autonomy of KRB from the central Government, to reflect stake-holders' voice in the management of the road network, and to facilitate introduction of a businesslike manner in management of road. The business like management is indeed one of the most valuable recommendations from the Road Sector Institutional Study in the 1995-1998.

The Board is also required to advise a wide range of road-related policies to the Minister of MRPW. The Minister has a power to change the organization which has the representation in the Board of KRB by the gazetted order, and has recently replaced the Chamber of Commerce and the National Farmers Union by the Kenya Association of Manufacturers and the League of Women Voters. Appointments of the Board members from the representing private sector organizations are made by the Minister. Service period of the members is a fixed three-year term which is extendable for one further term. The current Board was inaugurated in September 2003. The chairperson is appointed by the President from the private sector Board members. The Executive Director is appointed by the Board in consultation with the Minister.

KRB is the best-resourced organization, in terms of both financial and human resources, in the road sector and has been fully operational with complementing secretariat staffs only for just over two years. The professional staffs are well motivated, qualified and experienced.

**(4) Functions and Business Process**

Based on the KRB Act, the core functions undertaken by KRB are four which are summarized as followings:

**Management Functions of the Funds**

- Manage the funds derived from the fuel levy and any other funds that may accrue to it.
- Determine the allocation of the funds required by road agencies for the maintenance, rehabilitation and development of the road network.

Coordination Functions of Policy

- Coordinate the implementation of all policies relating to the projects of the road network.

Monitoring Functions of Road Agencies Activities

- Monitor and evaluate the operations or activities undertaken by road agencies in the development, rehabilitation and maintenance of roads by means of technical, financial and performance audit with a view to achieving efficiency, cost effectiveness and safe.
- Monitor all procurements for road works or other associated works in accordance with the guidelines and criteria set out by KRB.

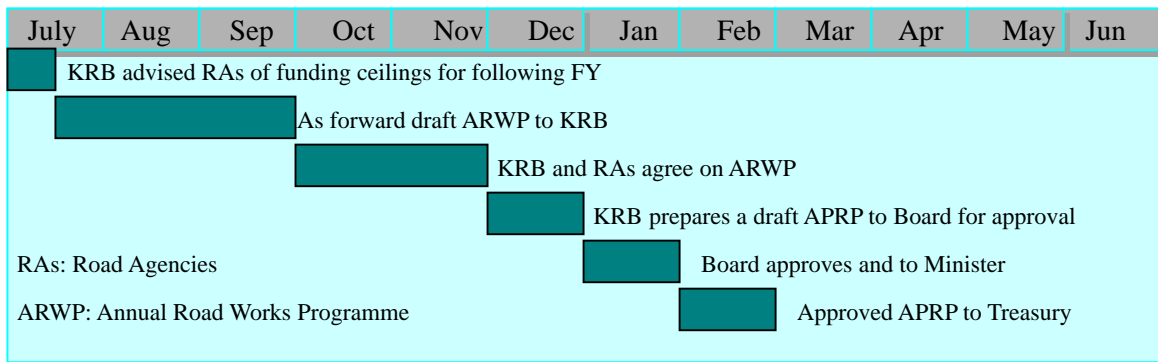
Recommendations Functions to the Government

- Recommend to the Government appropriate levels of road user charges, fines, penalties, levies or any sums required to be collected under the RMLF;
- Advise the Minister on studies necessary for road development and improvement, on specifications, design standards and classification of roads, on types, sizes and usage of vehicles on roads and the laden and axle load limits for protecting roads from damage, and on how to implement efficiently and effectively road maintenance; and on training of human resources.

One of the most important functions in KRB is to prepare, review and approve the Annual Public Road Programmes (APRP). The APRP is a key step for KRB towards a scientific management of the funds, which is internationally a fundamental document for a fund organization to manage its funds. The process of the APRP preparation is shown in Figure 7.2-3.

The APRP is the basis for disbursement of the funds to local agencies, and is also the basis on which the activities of road agencies are evaluated. KRB requires its road agencies to prepare their annual road works programme for submission to the Board at least 6 months before the commencement of every fiscal year. These annual road works programs are analysed by the Board, and once acceptable all the work programs are consolidated to form the final APRP. KRB has prepared and circulated draft guidelines among road agencies for better program preparation in line with the direction of fund utilization. The guidelines include following 5 criteria:

- Road maintenance selection prioritization criteria for road classes A, B, C, and for urban roads,
- Limitations for overheads, material purchase, equipment repair and maintenance, office operations and training,
- Preparation of annual work plan for routine maintenance activities,
- Preparation of an activity list of routine and periodic maintenance, and
- Compliance with the procedures regulated by the Board.



**FIGURE 7.2-3 APRP PROCESS**

The APRP for the fiscal year 2003 - 2004 had been approved by the Board and covers projections for the fiscal years 2004 - 2005 and 2005 - 2006 in the time of February 2004.

**7.2.3 Other Players**

**(1) MOLG and UDD**

The MOLG was established in 1963 to oversee the operations of Local Authorities, under the Local Government Act, CAP 265 of the Laws of Kenya and over 30 other statutes. The MOLG facilitates the operations of all 175 local authorities through the creation of an appropriate legal framework. The other statutes that guide the operation of the Ministry and local authorities are summed up into Table 7.2-2.

**TABLE 7.2-2 MAIN STATUTES GUIDING THE MOLG OPERATIONS**

Area	Contents	CAP No.
Administrative	01 Limitation of Action Act	CAP 022
	02 Public Authorities Limitation Act	CAP 039
	03 Local Government Act	CAP 265
	04 Registration of Titles Act	CAP 281
	05 Registration of Documents Act	CAP 285
Social	01 Housing Act	CAP 117
	02 Education Act	CAP 211
	03 Public Health Act	CAP 242
	04 Land Group Representatives Act	CAP 287
	05 Registered Land Act	CAP 300
	06 Land Control Act	CAP 302
	07 Wildlife Conservation and Management Act	CAP 376
	08 Environmental Management and Coordination Act of 2000	-
	09 Children Act of 2001	-
	10 Water Act of 2002	-
	11 Community Service Orders Act of 1998	-
Economic	01 Valuation of Rating Act	CAP 266
	02 Rating Act	CAP 267
	03 Local Government Loans Act	CAP 270
	04 Local Authorities Provident Fund Act	CAP 272
	05 Local Authorities Recovery of Possessions of Property Act	-
	06 Land Adjudication Act	CAP 284
	07 Physical Planning Act	CAP 286
	08 Trust Land Act	CAP 288
	09 Land Acquisition Act	CAP 295
	10 Agriculture Act	CAP 368
	11 Exchequer and Audit Act	CAP412
	12 Trade Licensing Act	-
	13 Local Authorities Transfer Fund Act of 1998	-
Transport	01 Roads and Roads of Access Act	CAP 399
	02 Traffic Act	CAP 403
	03 Transport Licensing Act	CAP 404
	04 Streets Adoption Act	CAP 406
	05 Kenya Roads board Act of 1999	-

MOLG has two core departments and is supported by various sections under the administration department. The two core departments are UDD and Department of Local Authorities Inspectorate (DLAI). UDD is the sub-agency of KRB under RD as the KRB's road agency. Table 7.2-3 shows organisation of MOLG.

The Presidential Circular No. 3 of July 2003 spells out the following responsibilities of MOLG:

- Local government sector policies,
- By-laws for local authorities,

- Support for capacity building for local authorities,
- Local authorities loan authority,
- Local authorities provident fund,
- Local authorities superannuation fund, and
- Local authorities transfer fund.

Based on this mandate the following functions are performed by the MOLG:

- Formulation, harmonisation and implementation of policies in the local government sector;
- Provision of physical and financial management and the regulatory framework for local authorities;
- Guiding and supporting local authorities in service delivery;
- Guiding local authorities on issues of planning and development through formulation and support in the implementation of development policies, strategies and programmes;
- Development and implementation of effective institutional, administrative and legal framework for operation of local authorities; and
- Spearheading local government sector reforms.

**TABLE 7.2-3 ORGANIZATION OF MOLG**

No.	Name of Department or Section	Technical Staff	Support Staff	Total
01	City Engineer Department Staff working in Department itself	2	25	27
02	Deputy City Engineer Staff working for City Engineer	1	5	6
03	Assistant City Engineer Staff working for Design	1	-	1
04	Assistant City Engineer Staff working for operation and services	5	5	10
05	Chief Assistance Engineer Operation and Services	1	-	1
06	Chief Assistance Engineer Implementation	135	343	478
07	Chief Assistance Engineer Roads	8	7	15
08	Chief Assistance Engineer Transport Unit	38	67	105
09	Chief Assistance Engineer Estate and Development	6	4	10
10	Principal Land Surveyor Engineering survey	9	21	30
	Sub-total	206	477	683
11	Other sections	-	-	969
	Total			1652

One of the core functions of MOLG is to carry out public infrastructure development and maintenance projects. In 1990s MOLG commissioned two major projects to solve urban transportation issues in the country. The first was the Kenya Urban Transport Infrastructure

Project (KUTIP) of which objectives were four folds: to expand the capacity of congested main traffic arteries, improve travel conditions for pedestrians and cyclists, reduce road accidents, and encourage a more efficient NMT system in major urban areas. The second was the Nairobi Long-Term Transport Study (1999) of which objectives were to establish a long-term strategic plan for the development of urban transport in Nairobi and prepare short-term and medium term programmes for the implementation of related projects. Under KUTIP several sub-studies were carried out to provide guidelines for investment decisions in various major urban areas.

## **(2) CCN and CED**

Nairobi is the capital city of Kenya accommodating its Central Government entity. Nairobi is also one of Africa's most important centers for commerce, industry, and tourism. Nairobi's transport and communication networks have been developed to link the cities of the nearby countries. Inter-continental and international air links have been established through Nairobi's airport and in coordination with east African regional roads and rail routes they have made Nairobi the region's most important transport center for all modes.

Presently the key powers relating to the road sector management, including access to an adequate revenue base, setting priorities and authorizing expenditure on transport infrastructure, as well as regulatory measures and their enforcement, are largely controlled by national institutions, mainly the MOLG, KRB and MRPW. This is in part a reflection of the political structure of government in Kenya. Although the national strategy envisions a shift of responsibility for urban transport to the City, CCN is not ready to receive it considering that it has been suffering from overstaffing which hinders proper allocation of budget for their services. For example, about 90% of the road maintenance funds in Nairobi were disbursed for wages and only 10% were spent on works directly.

CCN has 10 departments, each with several sections, and with broader bases of skills than many national institutions. CCN has a City Engineer's Department (CED), which could be a trustworthy organization delivering sufficient services, if it was vested adequate authority and resources. Since the members of the City Council are elected, the Council is accountable to the urban constituency. The residents expect better service and tend to complain the City Council, and specifically the CED. Based on the survey by the Team, CED has 1,652 staff in total, and 10 main units.

CCN has a road network of approximately 1,500 km including non-adopted and private roads. The road network is divided into four categories for purposes of administration as detailed in the Table 7.2-4.

TABLE 7.2-4 ROAD NETWORK IN CCN<sup>1)</sup>

Description	Paved (km)	unpaved (km)	Total (km)
Classified <sup>2)</sup>	265	Nil	265
Adopted <sup>3)</sup>	665	85	750
Non-adopted <sup>4)</sup>	Nil	465	465
Private	20	Nil	20
	950	550	1,500

Note: 1) Length of Road Network is different from city road list of CCN because non-adopted and private roads are included.

2) Classified: public roads that are part of national road network and are administrated by MRPW.

3) Adopted: public roads that conform to CAP 406 (Street Adoptions Act) and are administrated by CCN.

4) Non-adopted: public roads but they are not conform to CAP 406 and are administrated by CCN.

Source: CCN Report to KRB, Roads Sector Liaison meeting, Feb, 2004, Annex III-2, P1.

Currently only 60% is in a good condition while the remainder is at various stages of deterioration. The mandate of CCN regarding the road sector includes, but is not limited to, the development, rehabilitation and maintenance (both routine and periodic) adopted and non-adopted roads. Past inadequate allocation of funds by CCN for road maintenance has led to inadequate, delayed and sometimes no maintenance of the city roads which has resulted in the current unsatisfactory road conditions.

### (3) Kenya Wildlife Service (KWS) and Forest Department (FD)

Both KWS and FD have extensive road networks that they maintain using their own resources. In addition there are some classified roads that provide access to parks and reserves, some of which are through routes, that are the responsibility of MRPW, but which are maintained by KWS on behalf of MRPW. KWS is specified as a road agency under the KRB Act, but FD is left un-specified.

There are a total of 59 parks and reserves in Kenya. Among them, however, only the 25 parks are directly managed by KWS. The remaining 34 game reserves are managed by county councils. Most of the parks and the reserves are accessed from the classified road network, but some roads within the parks are also classified and a small number of them are through routes used by non-park traffic. To deal with the situation KWS has in-house capability of road maintenance. Most of these classified roads mentioned above are maintained by KWS under agreement with MRPW, at least within the park boundaries and some cases where the roads form the principal access route to park gates. Only the access road to Nairobi National Park is paved, all the other access roads are gravel or earth. The roads in the parks are maintained in reasonable condition with about 60% being in good to fair condition and the remainder needing some form of rehabilitation. The classified roads serving parks and reserves account for about 10% of the total length of the classified road network.



KWS has its own road maintenance organization which is relatively well resourced having benefited from investments under various projects supported by international aid agencies such as the Protected Areas and Wildlife Service (PAWS) project, which was financed by WB and other financing from JICA. And being as a statutory corporation relatively unfettered from government procurement and accounting procedures, KWS is able to operate more flexibly and efficiently hiring professional staffs on reasonable salaries and applying business management principles.

FD has a network of access, feeder and plantation roads used for the management of forest resources that extends 6,800 km which is maintained using its own force account units.

The Forest Act, CAP 385, is the principal legislation for the conservation, management, and utilization of forests and forest products. FD is in charge of conservation, management, and utilization of forests and forest products. Besides FD, the other major institution in this field is the Kenya Forestry Research Institute.

### **7.3 PUBLIC TRANSPORT ADMINISTRATION**

#### **7.3.1 The Ministry of Transport (MOT)**

MOT is in charge of the following organizations:

- Kenya Meteorological Department which provides free public weather information,
- Motor Vehicle Inspection Unit which ensures road worthiness of vehicles on Kenya's roads, and
- Transport Licensing Board (TLB) which allocates public service routes to operate on.

MOT is also responsible for overseeing smoother operations of the following transport service related state corporations:

- Kenya Civil Aviation Authority (KCAA),
- Kenya Airport Authority (KAA),
- Kenya Ports Authority (KPA),
- Kenya Ferry Services,
- Kenya Railway Corporation (KR), and
- Kenya National Shipping Line.

In terms of transport policy making and transport management, a major department is the Transport Division. This division consists of three officers with support staff like secretaries and office assistants. The division oversees the functions of TLB and Motor Vehicle Inspection Unit. It interfaces MOT with these technical organizations in addition to advising the Permanent Secretary on policy issues affecting the two organizations. The Transport Division also liaises the Registrar of the Motor Vehicle which administratively falls under

Kenya Revenue Authority currently. The core business in this division is road safety matters including legislation, inspection and licensing of motor vehicles, and is policy formulation and coordination.

### **7.3.2 Traffic Management Administration**

#### **(1) Overview**

Urban transport management generally represents a combination of policies, practices and measures which are specially deliberated and implemented for a particular urban area in a coherent, comprehensive and consistent manner. In general, the following are the purpose and objectives of traffic management efforts:

- To maximize the efficient utilization of the existing transport system through various low- and medium-cost capital improvement coupled with focused operational practices, and
- To apply the above to ensure normal transport operations in the event.

As stated before, in the traffic management and services (management is actually a sort of service field) sector, unfortunately, there is no core institution like the KRB to play a coordinative role. Therefore, the structure in this field could not take on a close relationship model, and it is actually just a fragmented structure model.

#### **(2) CCN-Transport Unit (TU) under CED**

TU, which is a large section under the CED with 105 staff in 2004, is mainly in charge of Nairobi traffic management. Based on the survey and other studies, roles of the TU have not been played efficiently and effectively, because of its insufficient capabilities, financial shortage and other miscellaneous reasons. TU could represent CCN's interest and provide technical support concerning traffic forecasting, demand management, transport corridor planning, road reserve usage, and safety issues.

### **7.3.3 Road Safety Administration**

Kenya has a fine legal framework for road safety with an updated Traffic Law, a simple but to basically reliable accident data recording system, and Traffic Police. Also the licensing systems and insurance systems have solid bases but they indeed have to be streamlined and improved.

The underlying reason for the gradually deteriorating road safety is lack of political priority, which hampers proper funding and consequently impedes development of technical competencies and capabilities with the end result of improper implementation of specifically targeted and focused road safety countermeasures. This results in an in-cohesive road safety

operational environment, where the main stakeholders act based on individual knowledge and personal experience, and drive – rather than on sound technical and systematic approaches and coherent policies.

As mentioned above there are a lot of organizations to be in charge of road safety management. In policy-wide road safety is under MOT, and engineering implementation is under MRPW. Data collection, vehicle inspection and enforcement are in the hands of the Traffic Police, which is under the Ministry of Interior Security. The licensing is under TLB, and emergency services are under the Ministry of Health. When so many different ministries and agencies are involved in one area, coordination and especially cooperation are essential. During the latest road safety program in the 1980s the National Road Safety Council (NRSC) was established to ensure these and to prepare annual action plans, but NRSC is inactive. As a result no annual action plan is prepared.

Existing cooperation among the agencies and ministries is inadequate. As a consequence the road safety works are scattered and in-cohesive. In order to improve this situation the MOT has introduced a Bill of Act to Parliament to amend the traffic act by establishing a Kenya Road Safety Agency (KRSA) operating under the autonomous scope with a board consisting of members both from the public and the private sectors which is similar to KRB.

The Traffic Police collects all accident data for the purpose of legal prosecution and/ or insurance claims. The accident data is processed through a P41 form to the Traffic Police headquarters on a regular basis enabling the Police to have good accident data. The accident statistics are forwarded also to MRPW.

Kenya vehicle inspection operates under the Kenya Police Department. They inspect a total of about 120,000 vehicles annually. They have 17 inspection centers. Among them the Nairobi center is the largest and best equipped.

As poor vehicle conditions especially among commercial vehicles and matatus resulted in larger number of accidents, the vehicle inspection needs to be upgraded in terms of technical competencies and capabilities, and most importantly to be connected to enforcement. Vehicle inspection has been suggested privatised by several stakeholders in order to upgrade the facilities, to minimize financial leakage, to ensure autonomy from corruption, and to create a better reputation through higher integrity.

The Traffic Police is enforcing the traffic law. In 2001 the Police processed 338,000 cases to the Magistrates. The Traffic Police has 1,474 Police officers throughout the country. Although enforcement seems strong, it is random and arbitrary.

The Kenyatta National Hospital and the Traffic Police together with stakeholders from private sector which include the insurance agencies and the Automobile Association have arranged a campaign every December for three consecutive years. They receive sponsorship from private companies.

Annual Action Plans (AAP) of road safety for Kenya is not being developed. AAPs are a valuable tool for target specific interventions in a coordinated and comprehensive manner.

The linkages between the Traffic Police and traffic safety related organizations such as the road safety sections in MRPW, DRC, and CCN and large municipality Councils have to strengthen. Since the Traffic Police holds valid data being processed manually which are available and directly useful for these organizations.

It is essential to strengthen cooperation among the stakeholders not only for them to perform their duties properly but also to improve road safety operational environment as it cross through different Ministries and to create larger and positive impacts on road safety in national, district and urban areas.

#### **7.3.4 Public Transport Service Suppliers**

##### **(1) Public Bus**

The Nairobi public transport system, apart from some limited commuter rail operations, entirely consists of road-based services, which are fully private. In addition, the system operates virtually under the *laisser-faire* (non-interference) principal. There is little or no government control of, or even influence on such crucial elements as route structure, operational practices, timetables and fares. The system basically consists of two completely different sub-systems of Kenya Bus Services (KBS) and matatus, which compete on the same routes with new entrants (privately owned large buses).

KBS is a private company that has some 277 large buses with capacity of 110 passengers each on fixed routes and schedules in 2001. Most routes it operates on are radial, passing through the City center. This reduces the need for passenger transfers and provides a competitive advantage over the matatus, which are permitted to enter the City center with the limitation only to some specific peripheral roads.

KBS started operations in 1934 as a subsidiary of Overseas Motor Transport Company, Ltd. of London (OMT). The company was taken over by United Transport Overseas Ltd. (UTO) in 1951. The policy decision of UTO in the late 1980s to discontinue operation created a crisis which was solved when Stagecoach Ltd. of Scotland took over UTO's shares in 1992 and the company was renamed Stagecoach Kenya Bus.

The ownership of the KBS Company has changed hands many times. In 1988 Stagecoach sold the company to a group of Kenyan investors, who changed the company's name back to Kenya Bus Services. At present KBS offers four services. Among them the Bus Track service offering ordinary city transport and the Metro Shuttle minibus serving the high/ medium income areas in Nairobi are subject to the Study.

According to a study carried out by KBS in August and September 2000, KBS's market share stood at some 17% for all routes, and 29% on KBS operated routes in the City. At that time KBS had about 240 buses operating daily, competing against 9,894 matatus and 15 country buses. The share has declined continuously. In 1994, KBS had 36% of the market. The small matatus were estimated to grow at about 31% per year in 2000. KBS transported some 300,000 passengers per day in 1990, while the number of passengers transported per bus per day has been steadily declining over the past years, from a high of 1,500 passengers/bus/day in the mid-80's to less than 1,000 in 1997. The network has been gradually reduced over time, as routes have been abandoned and taken over by matatus.

There are 30 Metro Shuttle minibuses, each with a capacity of carrying 33-seated passengers. They were newly bought and are well maintained, clean, carrying no standing passengers, and operated accordingly to the timetables. However, they are about 50% more expensive than the matatu. Their marketing targets are the middle- and high-income urban residents who value their comfort, safety, and time at higher bus fares, and are ready to pay the fares. KBS hopes to increase the fleet, as initial indicators demonstrate that the operation can expect better profits than the Bus Track service.

Bus Track vehicles are refurbished old buses that have been plying city routes. Approximately 240 buses ply the city routes daily. The Bus Track service has been operated by former employees (former KBS supervisors) in some sort of lease from the company since 2001. The buses are operated on a profit sharing basis between the company and individual operators. Each operator manages about 10 buses. The leasing out the buses and licensing of private bus operators also affected the matatu operators who had dominated some of the routes previously not served by KBS due to poor road conditions.

**(2) Matatus**

Matatus mostly operate on the same routes as Kenya Bus Service, but without timetables. Matatus mainly types are: the 18-seater vehicle and the 25-seater vehicle. On some routes they compete among themselves even without KBS presence on the routes. According to data collected for the study done in May 2002, about 63% of the small matatus (18-seater capacity) are over 10 years old, while about 70% of large matatus are less than 10 years old. About 95% of all matatus cost generally less than Ksh 1 million. About 47% of the small matatu owners owned only one vehicle, 34% owned two, and 19% owned more than 2 vehicles. For the small matatu owners, their main reason for choosing the vehicle was for financial (38%) and economical (31%) reasons. For the large matatus owners, it was mainly economical (36%) and informal route regulation (24%) by the operators.

The term “matatu system” refers to the system that has existed in Nairobi at least for 25 years and it is still lively today. It is not a “technical” definition, but rather a description of a set of practices regarding ownership, route structure, operational structure, control (or lack of it), interaction between various economic interests in the society, and source of an intolerant certain traffic behavior.

When matatu system was legalized in 1973, the establishment of new routes was in principle no limitation. It was considered that the system would assist small, hard-working enterprise to make a living beside the big business represented by the dominant bus company. Soon, however, syndicates emerged for profiting from matatu operators. Today, most routes are controlled by loosely formed “associations” who act as self-appointed “owners” of the routes. The vehicles themselves are owned by individual investors, normally not the drivers. Matatu owners are found in many layers of society. Although the official cost for starting operations of matatu is Ksh 4,300 consists of Ksh 800 of registration and Ksh 2,500 of parking fee to CCN and Ksh 1,000 of payment to the cooperative, it is rumoured that an owner wanting to operate his matatu on a route has to pay an “entrance fee” which can be as high as Ksh 100,000.

The malpractice characteristics of the matatu industry were accurately and outspokenly documented in the Ministerial Committee Report of 1986 and this led to the recommendation to actively fight the syndicates and to dissolve the Matatu Vehicle Owners Association (MVOA) and the Matatu Association of Kenya (MAK). However, the present situation shows no improvement. At present it appears that the banning of MVOA may in fact create more problems by making outside control impossible.

Some control is at present exercised by the Nairobi Traffic Management Committee which handles applications from the matatu industry to use terminals. When considering these, for

approving the applications the Committee may take into account factors such as availability of land in the city center and entry routes there, but also whether the proposed route is likely to interfere with existing ones. In this way, some establishment control can be said exist.

The matatu have been banned from the western part of the city center on the grounds that they disturbed traffic and this was actually observed. Also the rule against operating larger vehicles than 25-seaters followed. These seem to indicate that matatu sector are subject to some regulation.

### **(3) Rail Transport: Kenya Railways Company (KR)**

Rail transport provides the closest alternative to road for the movement of freight and passengers, thus the review of rail is more important than perhaps the other modes of transport.

The financial and regulation requirements of rail transport are quite different to roads and make rail difficult to compete with roads on the same ground. Differing from road transport, KR also has to finance railway police and security, amortisation of all assets including fixed assets and un-remunerative services required by Government. Through various social services, KR employs 6,000 more personnel than the required personnel for core operations. It is also worth noting that KR has cross-subsidized to the turn of over Ksh 1.7 billion for the maintenance of roads through the fuel levy. Any future transport policy must address these issues.

KR comprises 2,778 km of lines of which 1,083 km are main lines, 346 km principle lines, 490 km minor and branch lines and 859 km private lines and sidings. There has been no expansion of the network over the last ten years. The main line from Mombasa to Malaba constructed over 100 years ago provides the backbone of the network.

The condition of the infrastructure has inevitably deteriorated due to lack of finance. Approximately 506 km of the main line suffers with speed restrictions resulting in average technical speeds of 40 kph for freight and 60 kph for passenger. Like roads, backlog rehabilitation is urgently needed, though there is no backlog maintenance program for rail that is contrary to roads which are currently being financed.

Freight volume (tons) has fluctuated during the last decade from a high of over 3.5 million tons in 1993 to a low of 1.5 million tons in 1997. Since 1997 freight traffic volumes have increased to 2.6 million tons in 2002. Overall numbers of passenger traffic had varied between 300-400 million passenger-km between 1993 and 2000, but since then they have sharply declined to below 180 million passenger-km. Passenger service routes comprise

Nairobi to Mombasa and Nairobi to Nanyuki. Typical passenger volumes on the Nairobi to Mombasa service are 32,000 per month and daily volumes of 12,000 are normal for the commuter services. Nairobi suburban services started in 2001. Clearly with increasing urbanization the demand for suburban services will increase but competition for intercity passengers with fast bus services travelling on good roads will be significant.

KR is predominantly a freight railway with 95% of its income being generated from freight. The current fleet comprises 150 diesel locomotives, 500 passenger coaches and 5,000 wagons, most of which will need to be replaced over the next ten years. Operational efficiency is reduced by about 25% due to the prevalence of speed restrictions. However, surplus capacity exists that mitigates the costs of sub-optimal performance. Nevertheless, output of 560 tons per wagon per year or 1.4 tons per day indicates a very poor level of utilization that is mostly explained by the fact that a larger proportion of the wagon fleet is either set aside waiting or surplus to needs. With restoration of infrastructure, rationalization of rolling stock, and judicious and efficient train planning, traffic costs can be reduced and demand can be increased.

KR employed 22,000 personnel at its peak. Currently the establishment stands at 9,500 with plans after concession that will reduce the establishment by a further 6,000 to 3,600. The employment reduction strategy envisaged after concession is sensible in commercial terms and partly explains the dismissal financial performance posted by KR for some time. It is estimated that the rail sector currently employs about 6,000 personnel that are not necessarily for its core services but are rather for provision of social services.

Shortly following the dissolution of East Africa Railways, the 1978 Kenya Railways Act set up KR as a state-owned company. The Act required the enterprise to balance its accounts and operate commercially. But the Act also ties KR management to the MOT for control of traffic, fares, investment, and budget. KR is also bound to employ a large cadre of personnel for social reasons, to provide entirely for its infrastructure and even to engage its own police force. Thus the 1978 Railways Act, like other contemporary legislation, provides a conflicting and ambiguous set of objectives for the undertaking. This Act remains in force and must be replaced by new legislation that establishes railways as an independent commercial entity that permits the private sector participation that has been enjoyed by the road sector for a generation.



## **APPENDIX 8**

### **FINANCIAL STRUCTURE AND BUDGETING**

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## APPENDIX 8 FINANCIAL STRUCTURE AND BUDGETING

### 8.1 FINANCIAL STRUCTURE AND BUDGETING

#### 8.1.1 Financial Structure of Urban Transport

##### (1) Public Expenditure on Main Public Services

The allocations of the government budget for various public services are shown in Table 8.1-1. Administration Services include general administration, external affairs, and public order and safety. Social Services include education, health, housing and social welfare. Economic Services include service delivery in the fields of agriculture, forestry, fishing, mining, manufacturing, construction, electricity, gas, water, road, other transport and communications, and other economic services. The economic services include roads, whose share was very large in the economic services delivery. By looking at Table 8.1-1, the following implications were observed:

- The government of Kenya (GOK) has to use a quite large proportion of public budget for service debt (average of 44% per year between 1997/98 and 2000/01);
- The social services occupy a relatively large share; and
- The budget used to economic services is very small.

**TABLE 8.1-1 GOK EXPENDITURE IN MAIN PUBLIC SERVICES**

Unit: US\$ million

Public Services	1997/98		1998/99		1999/20		2000/01		Average
	amount	%	amount	%	amount	%	amount	%	%
Administration	613.7	12.2	670.5	17.1	568.0	18.5	1,045.8	24.9	17.9
Defence	162.5	3.2	170.9	4.4	143.0	4.7	182.8	4.4	4.1
Social	1,005.5	20.0	983.0	25.1	826.6	27.0	859.3	20.5	22.7
Economic	409.9	8.2	440.9	11.2	379.9	12.4	623.3	14.9	11.4
Public Debt	2,836.4	56.4	1,655.9	42.2	1,149.0	37.5	1,484.4	35.4	44.0
Total	5,027.9	100.0	3,921.1	100.0	3,066.5	100.0	4,195.6	100.0	100.0
Roads	123.0	2.4	131.3	3.3	121.3	4.0	138.1	3.3	3.2

Source: Kenya Road Concessioning Assessment, the World Bank, March 2002, p3-3.

Because of huge debt services, several partner countries and international organizations have been supporting the GOK by means of debt funding. By 2002 the largest contributors to the 2000/01 public debts were the Government of Japan and IDA (the World Bank).

## 8.1.2 Budget Allocations for the Road Sector

### (1) Overview

Kenya has made quite remarkable progress during 1990s in allocation of domestic resources for the road sector, especially for road maintenance. Even though the Government has been experiencing major financial problems, the recurrent budget (the Road Maintenance Fuel Levy) has not been affected by either diversion or borrowing. The governmental budgets in 1990s on the road sector is shown in Table 8.1-2.

**TABLE 8.1-2 BUDGETS IN THE ROAD SECTOR IN THE 1989-2001**

Unit: US\$ million (2001 price)

FY	Recurrent			Development	Total Funding
	Budget	Toll	Sub-total		
1989/90	37.3	9.9	47.2	152.9	200.2
1990/91	28.8	13.5	42.2	131.8	174.0
1991/92	26.5	14.8	41.3	115.5	156.8
1992/93	24.6	14.3	38.9	104.1	143.0
1993/94	19.3	9.8	29.1	68.3	97.4
1994/95	34.2	0.0	34.2	29.5	63.6
1995/96	60.2	0.0	60.2	65.5	125.7
1996/97	81.0	0.0	81.0	100.3	181.3
1997/98	96.5	0.0	96.5	58.1	154.6
1998/99	85.8	0.0	85.8	51.3	137.1
1999/00	89.2	0.0	89.2	46.7	135.9
2000/01	87.7	0.0	87.7	37.3	125.0
2001/02	89.9	0.0	89.9	47.7	137.6
<b>FY89-95</b>	33.0	9.0	42.0	95.0	137.0
<b>FY96-01</b>	88.0		88.0	57.0	145.0

Note: The funding allocations are for the classified road network.

Source: Strategic Review: the Kenya Road Sector, the World Bank, Mary, 2002, p7.

The comparison of the annual average funding of fiscal year 1996-2001 with the fiscal year 1989-1995 in the table shows that the recurrent funding increased in more than double from US\$ 42 million during fiscal year 1996-2001 to US\$ 88 million during fiscal year 1989-1995 in terms of year 2001 price. This significant increase solely owes to the creation of the Road Maintenance Levy Fund (RMLF) in 1993 and its execution since 1994. But development funding has fallen substantially, and the net increase in overall funding had been marginal. Development funds come mainly from the donor aids, and the flow of development funds has been seriously affected by the reduction of aids to Kenya in the 1990s.

Since the establishment of the new Government, financial budget for the road sector has increased steadily, due to growth of the fuel levy and recovering trend of foreign development assistances. The latest data regarding total road sector budget amounting to US\$276.28 million for the fiscal year 2004/05 shown in Table 8.1-3 indicates a substantial growth comparing to the average total budget for the road sector during fiscal year 1996-2001 amounting to US\$145.0.

TABLE 8.1-3 TOTAL FUNDING FOR THE ROAD SECTOR IN FY 2004/05

	Financial Sources	Projected Funding (US\$ million)
1	RMLF	108.75
2	Transit Toll Collection	2.5
3	Development Budget for MRPW	145.36
4	Urban roads development	9.49
5	LATF	10.18
	Total Road sector funding	276.28

Note: The RMLF is a dedicated tax levied on petrol and diesel for the maintenance of roads, and its rate is currently US\$ 7.25 cents = Ksh 5.90 per liter. Development budget, urban roads budget and LATF are all derived from Government's general revenue budget. Development budget comes mainly from the foreign development partners.

Source: The KRB Operation, KRB, Nov 2004, p8.

Total amounts for the road sector in fiscal year 2004/05 is US\$ 276.28 million which is more than the double amount of fiscal year 2001/02 (US\$ 137.60 million). It should be emphasized, however, that the required cost for carrying out full maintenance on the roads currently in good condition, plus "holding" maintenance on roads in fair condition would be over Ksh 8 billion which is approximately equals to US\$ 100 million, against the road network as of 2003. The amount is just about equal to the revenue presently available from the RMLF. Details of the costs are shown in Table 8.1-4.

TABLE 8.1-4 ANNUAL MAINTENANCE COST REQUIREMENT OF THE ROAD NETWORK

Unit: Ksh million

Network	Class		Total	Normal Mt 2003		Holding Mt 2003		Total Mt 2003	
			Km	km	Per yr	km	Per yr	km	Per yr
Classified	Paved	< 50vpd	2,594	361	86	2,234	142	2,594	228
		> 50vpd	6,343	1,177	642	5,166	458	6,343	1,099
		Sub-total	8,937	1,538	728	7,399	600	8,937	1,328
	Gravel	< 50vpd	15,930	7,965	597	7,965	299	15,930	896
		> 50vpd	11,250	6,102	1,204	5,148	193	11,250	1,397
		Sub-total	27,180	14,067	1,801	13,113	492	27,180	2,293
	Earth	< 50vpd	20,958	10,479	382	10,479	191	20,958	573
		> 50vpd	6,213	3,371	193	2,842	52	6,213	245
		Sub-total	27,171	13,850	575	13,321	243	27,171	818
	Total			63,288	29,455	3,104	33,833	1,334	63,288
Urban	Paved	Primary	1,001	250	286	751	261	1,001	547
		Secondary	1,489	372	211	1,116	265	1,489	476
		Sub-total	2,490	623	497	1,868	526	2,490	1,023
	Gravel	Secondary	12,040	6,020	2,235	6,020	361	12,040	2,596
	Total			14,530	6,643	2,732	7,888	887	14,530
All Roads	Paved		11,427	2,160	1,225	9,267	1,126	11,427	2,351
	Gravel		39,220	20,087	4,036	19,133	853	39,220	4,889
	Earth		27,171	13,850	575	13,321	243	27,171	818
	Network Total		77,818	36,097	5,836	41,721	2,221	77,818	8,057

Source: Kenya Transport Sector Policy and Roads Sub-sector Strategy Study, Scott Wilson, December, 2003, Vol.1, p34.

The said table shows that urban road maintenance requires Ksh 3,619 million which is about 44% of the total cost amounting to Ksh 8,057 million. The analysis on required maintenance

costs contrasts with the current allocation of resources for maintenance which allot only 7.5% of RMLF to urban roads i.e. about Ksh 600 million which corresponds only one sixth of urban roads maintenance needs. Another estimate from KRB at the 2004 Liaison Meeting shows that annual maintenance needs for the entire network are about Ksh 15 billion.

Another point to emphasize is that, a lot of monies are needed not only for routine maintenance with good and fair conditions, but also for urgently required restoration works of the network. The estimated cost for restoration of the entire network to a maintainable condition is shown in Table 8.1-5.

**TABLE 8.1-5 COST OF RESTORING THE ROAD NETWORK**

Unit: Ksh million

Network	Class		Periodic Backlog		Rehabilitation		Reconstruction		Total	
			Km	Cost	Km	Cost	Km	Cost	Km	Cost
Classified	Paved	< 50vpd	1,179	4,048	521	5,208	533	10,503	2,234	19,759
		> 50vpd	2,339	7,954	1,937	23,012	890	17,102	5,166	48,068
		Sub-total	3,519	12,002	2,458	28,220	1,423	27,605	7,399	67,827
	Gravel	< 50vpd	0	0	7,965	11,470	0	0	7,965	11,470
		> 50vpd	0	0	5,148	8,481	0	0	5,148	8,481
		Sub-total	0	0	13,113	19,951	0	0	13,113	19,951
	Earth	< 50vpd	0	0	10,479	6,707	0	0	10,479	6,707
		> 50vpd	0	0	2,842	1,819	0	0	2,842	1,819
		Sub-total	0	0	13,321	8,525	0	0	13,321	8,525
	Total		3,519	12,002	28,892	56,697	1,423	27,605	33,833	96,303
Urban	Paved	Primary	277	2,220	474	7,577	0	0	751	9,797
		Secondary	435	1,742	681	5,448	0	0	1,116	7,190
		Sub-total	713	3,962	1,155	13,025	0	0	1,868	16,987
	Gravel	Secondary	0	0	6,020	14,448	0	0	6,020	14,448
	Total		713	3,962	7,175	24,473	0	0	7,888	31,435
All Roads	Paved		4,232	15,963	3,612	41,245	1,423	27,605	9,267	84,813
	Gravel		0	0	19,133	34,399	0	0	19,133	34,399
	Earth		0	0	13,321	8,525	0	0	13,321	8,525
	Network Total		4,232	15,963	36,066	84,170	1,423	27,605	41,721	127,738

Source: Kenya Transport Sector Policy and Roads Sub-sector Strategy Study, Scott Wilson, December, 2003, Vol.1, p35.

The cost for clearing backlog maintenance and carrying out rehabilitation and reconstruction of the entire network, which consists of the classified and urban roads including both paved and unpaved roads, is approximately Ksh128 billion (around US\$ 1.6 billions). This is a big amount of money as compared to the one year budget of the RMLF for the network maintenance which is only Ksh 8 billion. Total amount of Ksh 128 billion is divided by Ksh 96 billion or US\$ 1.2 billion for classified roads and Ksh 31 billion for urban roads. No estimate has been made for the unclassified network.

A current big issue is the clearance of backlog periodic maintenance on the paved roads. The clearance has to be conducted within the immediate short term to prevent these roads from exceeding the degree of deterioration at the turning point to substantial increase in rehabilitation unit cost. Unfortunately, RMLF is currently fully committed (or even over-committed) on on-going contracts, most of which are for rehabilitation and/ or reconstruction of unpaved roads. Thus, without external funding assistance backlog periodic maintenance is going to be left deferred although much more rehabilitation costs shall inevitably be born.

The rehabilitation and reconstruction cost of the paved network is estimated at about Ksh 85 billions or almost US\$ 1.1 billions of which about 20% are ones for the urban road network. Rehabilitation of unpaved road network is estimated at about Ksh43 billions or US\$ 500 millions of which about 33% are one for urban gravel roads.

From the foregoing, there is a huge funding gap of more than Ksh 100 billion or over US\$ 1.25 billion for backlog maintenance execution. Furthermore additional annual fund of about Ksh 3 billion is also required for routine and periodic maintenance. This annual shortfall causes supplementary fund requirement for backlog maintenance to the aforementioned sum of the funding gap.

## (2) MRPW

According to an internal document, MRPW's budgets for FY 2003/04 and 2004/05 have large growth. Compared with Ksh 3.86 billion in FY 2002/03, the budget for FY 2003/04 increased to 19.5 billion, and further increase to 25 billion is observed in this fiscal year. The increase comes from growth of both the RMLF (recurrent budget) and the development budget (See Table 8.1-6).

**TABLE 8.1-6 MRPW BUDGET BETWEEN THE FY 2002-03 AND 2004/05**

Unit: Ksh million

Fiscal Year	2002/03 Net Approved	2003/04 Gross Expenditure	2004/05 Gross Estimate
Recurrent Budget	2,230	10,865	11,618
Development Budget	1,627	8,663	13,360
Total Budget	3,857	19,528	24,978

Source: The Project for Construction of Rural Bridges in Central and Eastern Kenya, Feb, 2004. p4.

## (3) CCN

The roads within the jurisdiction of Nairobi City are divided into classified roads and unclassified urban roads. These roads can further be divided into pave and unpaved. In terms of the urban paved road, CCN has about 2,490 km, almost 66% of the entire Kenya's paved

urban roads. In terms of the unpaved urban road, CCN has 12,000 km, about 12% of all unpaved urban roads. But CCN, for a long time, has received only a little of funds for its road maintenance. In FY 2003/04 the received funds are highest, US\$ 4.32 million, however, in the year before 2002/03 CCN only received US\$ 1.75 million. Since KRB in operation, KRB already allocated two times of road budgets for CCN (in the 2002/03 and 2003/04). The annual average of such allocation is US\$ 2.23 million, which is less than 3% of the RMLF as a total.

For the last three years, the following roads were improved through the funds for Nairobi:

- 10 km over-laid under periodic maintenance programme,
- 65 km of roads had their streetlights rehabilitated,
- 160 km of roads were repaired under routine maintenance programme both in-house and contracted, and
- 64 km of roads were gravelled.

The study done by the World Bank team shows that the estimated amount of the possible maintenance needs for the national urban paved networks is about US\$ 13.7 million per year, of which, 65.6% (US\$ 9 million) has to be used in Nairobi City. The length of paved urban roads outside Nairobi is extremely small. Among US\$ 9 million, the World Bank team considers that US\$ 3.3 million of fund should be allocated for routine maintenance and US\$ 5.8 million for periodic maintenance. Based on this study, the funds used currently by CCN are just one third of its needs.

#### (4) MOLG

Between 1997 and 2001, the MOLG received 20% of the total RMLF for the maintenance of Local Authorities roads. KRB Act 1999 excluded local authorities from accessing the RMLF funds. In 2002 the Urban Development Department (UDD) of MOLG was appointed as a sub-agency. The road funds received by UDD between 2000/02 and 2002/03 are summarized in Table 8.1-7.

**TABLE 8.1-7 ROAD FUNDS UDD RECEIVED IN THE FY 2000/01-2002/03**

Unit: Ksh

Source of Funding	2000/01	2001/02	2002/03
RMLF			
LATF	156,269,930	226,069,215	
Development GOK Account	115,249,740	54,358,166	20,000,000
Development Aids Account	807,006,025	101,271,499	1,200,000,000
Total	1,078,525,695	381,698,880	1,220,000,000
Total in US\$ million	13.48	4.77	15.25

Source: The Report submitted by UDD for KRB, Feb, 2004

For this period, the total US\$ 33.5 million road funds were used in these projects:

- 528 km of roads were rehabilitated under IDA and GOK financing;
- 7500 m<sup>2</sup> of bus/matatu parks and roadside parking were rehabilitated;
- 16 km of footpaths and cycle tracks were built;
- 5 footbridges were constructed.

## **(5) KWS**

KWS is in charge of planning and executing the routine and periodic maintenance of the unclassified roads within the national parks and 5 national reserves. KWS also carries out maintenance of selected classified access roads and all internal classified roads under an MOU agreement with the Chief Engineer (Roads) of the MRPW. The classified access roads leading to parks and reserves are 4,422 km.

For the last two financial years KWS has received from the Government Ksh 27 million annually in budgets for the maintenance of unclassified roads and airstrips. This is far below the estimated Ksh 180 million required annually for all parks and reserves. The funding is distributed to 12 projects.

In the 2002/03 financial year KWS as its road agency presented to KRB a budget of Ksh 60 million that was approved. In this year KWS actually received a total of Ksh 51 million from KRB. This funding is mainly used for maintaining the roads in Tsavo National Parks, Amboseli National Parks and other national parks.

## **8.2 MAIN FINANCIAL SOURCES**

### **8.2.1 Overview**

Financial resource for the road sector in Kenya has been, up to now, coming from governmental public funds. Private sector participation has been studied and discussed, but there has been currently not into practice.

Public sources for the road sector can be broadly divided into two categories: internal (domestic) and external (foreign development donor aids). In terms of the domestic funding, the largest source is the Road Maintenance Levy Fund (RMLF) created in 1993, and managed by the Kenya Roads Board (KRB), and the second the Local Authorities Transfer Fund (LATF), set up in 1999, now managed by the Ministry of Local Government (MOLG). These are the most important public financial sources for road maintenance, rehabilitation and even development in Kenya. Before RMLF and LATF, funding for road sector mainly approved and allocated by the governmental institutions, i.e. by the MRPW for the classified roads and by the MOLG for the unclassified and urban roads.



Currently, except the RMLF and the LATF, which focus mainly on national road maintenance and rehabilitation, GOK almost has no other sources for road maintenance, but still arranges some relatively smaller and non-routine budgets for road development and for supporting to the new road construction projects financed by foreign donor aids. In addition, cess (a classic word means tax) is also a money source for the road maintenance. Main financial sources including the foreign development aids are described in the following sections.

### **8.2.2 RMLF**

In response to the serious lack of sustainable sources of funding for road maintenance and repair and to the recommendations of the 1992 Seminar, a Road Maintenance Levy Fund (RMLF) Act was passed by Parliament in 1993. The Fund receives the proceeds from a fuel levy on any petroleum fuels consumed in Kenya, and from the transit tolls levied under the Public Roads Toll Act.

The government responsible for administrating the RMLF up to year 2000 was the MRPW (the Permanent Secretary). However, with the Kenya Roads board Act of 1999, the responsibility for operating the Fund was transferred to KRB. In the first fiscal year of introduction of RMLF, the amount levied was about US\$ 34 million, and up to FY 2001/02, it had grown to US\$ 90 million with gradual increase in the levy rate. And in fiscal year 2003/04, it is over US\$ 100 million.

The collection and disbursement of RMLF for the last two and half years (FY2001/02, 2002/03 and 2003/04 (Jul-Dec)) are shown in Table 8.2-1. This table indicates that MRPW receives about 54% - 60% of the Fund in the latest two and half years and CCN received about 1.2% - 1.3%. Another data shows that in the fiscal 2003/04 over 31% of the RMLF is allocated for works on the classified D and E roads and below in the districts, about 7.5% for urban (of which 20% is for Nairobi), and the remaining 57% for classified A, B and C roads.

KWS has a very small portion of the Fund for the maintenance of some classified roads in the parks.

TABLE 8.2-1 COLLECTION AND DISTRIBUTION OF RMLF

Unit: Ksh

	2003/04 (Jul-Dec)	2002/03	FY2001/02
Fuel Levy Receipts	4,081,423,000	7,739,101,836	7,836,411,000
Disbursement	3,716,420,000	6,920,940,822	7,858,043,000
Balance	365,003,000	818,161,014	-21,632,000
Breakdown of Disbursements			
KRB	120,714,916	228,984,144	235,291,736
MRPW/RD: Class ABC Roads	2,293,583,387	4,003,017,283	4,208,874,750
District Roads-RD: Class DE & others	239,513,720	807,249,457	1,344,459,625
Urban Roads: Sub-total	198,063,400	675,689,939	894,222,358
MOLG/UDD	142,482,796	446,129,331	894,222,358
Nairobi City Council	45,614,645	93,247,222	
Mombasa Municipal Council		31,162,504	
Nakuru Municipal Council	5,971,153		
Eldoret Municipal Council	3,994,806		
LAs: 46 Towns & Municipalities		105,150,882	
KWS: Park Roads	24,544,700	51,000,000	
DRCs: Constituency Roads	840,000,000	1,155,000,000	1,175,194,479
Total	3,716,420,123	6,920,940,822	7,858,042,949
Rate of Disbursement (%)			
MRPW/RD: Class ABC Roads	61.71	57.84	53.56
Nairobi City Council	1.23	1.35	0
KRB	3.25	3.31	2.99

Source: Progress Report by KRB, Annex II, Feb 2004, p13.

24% of the total RMLF were distributed to the 71 districts accordingly to a formula that accounts for differing needs in terms of land area, population, network length, traffic levels and economic activity.

Current funding allocations obviously favour the rural network in disproportional manner. The urban roads receive only a small fraction of the RMLF, despite the fact that these roads carry most of the traffic and require the most expensive maintenance unit cost per km basis.

Based on the KRB Act, RMLF is required to be allocated according to the breakdown:

- At least 24% equitable to DRCs,
- At least 16% equally to all constituencies,
- At most 3% for KRM operation, and
- The balance RMLF for other roads, i.e. for MRPW (about 57%).

Because of a big gap between road maintenance needs and actual limited funding sources managed by KRB, KRB is doing a study to increase fuel levy rate, applying Birmingham model to establish optimal fuel levy rate in order to enlarge fund amounts. The study is carried out under the Northern Corridor Transport Improvement Project under WB fund. In addition, KRB is considering a possibility of collection of other road related funds (LATF, cess etc), as well as land rate to be managed by KRB. For this, KRB has established the amount of cess collection at Ksh 373 million for FY 2002/2003, because the Agriculture Act (Cap 318) amended in 2002 stipulates that 80% of cess shall be used for road works.

### **8.2.3 LAFT and Cess**

Financial reforms started by addressing the inter-governmental fiscal relations which resulted to the establishment of Local Authorities Transfer Fund (LATF), under the Local Authorities Transfer Act No.8 of 1998. Under the fund, the government allocated 5% of the total annual national income tax revenues for distribution to all local authorities in the country as a grant, based on transparent criteria. The fund is supporting good financial management, debt resolution, and service delivery and strengthening participatory development by involving stakeholder participation in Local Authority programs and activities. LATF is now operated and managed by MOLG.

Cess is a sort of tax levied on the transactions of agricultural products. Cess is usually collected by the officials at the transaction centres of the independent authorities, agencies and/or boards in charge of the respective agricultural products. The management of Cess money however is not standardized. Some boards hand money over to local authorities, while others send it directly to MOLG. Recently part of Cess is controlled by KRB with its authority to administer 80% of cess. KRB is administering the Cess money maintaining the linkage with its disbursement to the programs for the collected locals.

LATF and Cess are not fixed, and fluctuate from year to year. However, two principles under the LATF are clear: one is certain amounts (averagely about 20%) have to use in road maintenance; and another the amounts allocated for road maintenance should not be used for other ways, just for work projects.

All money from the LATF needs to break-down in the program known as Local Authority Service Delivery Action plan (LASDAP). During FY 2002/03, a total of Ksh 199 million was disbursed for directly to designated projects. A total of 30 projects were undertaken dealing with improvement of roads, storm water drains and street lighting. The component of roads, storm water drains and street lighting makes up 33% of the total LASDAP projects at an estimated cost of Ksh 66.4 million.

Nairobi, in FY 2002/03, received Ksh 347 million, and 2003/04 Ksh 647 million from MOLG. Based on the regulation of CCN, there is approximately Ksh 60 million to be used for road maintenance and street lighting.

Now KRB is administering part of Cess according to its vested authority to administer 80% of Cess fund. Cess funds are utilized for projects/ programs particularly to the respective fund collected areas.

#### **8.2.4 Foreign Donor Aids**

A number of foreign development partners including some international financial organizations have been financing the transport sector in Kenya for a long time. Recently some foreign development partners are active on road improvement, for example, on the Northern Corridor road EU is financing the reconstruction of the Mtito Andei – Sultan Hamud section (135 km) for which the construction works began in April 2003. It is planning to finance the Mai Mahiu – Naivasha – Lanet (85 km) section. EU is also engaged actively in the Roads 2000 program along with DANIDA (Denmark), SIDA (Sweden), KfW (Germany), AfD (France) and AfDB for rehabilitation and periodic maintenance of rural roads in about 26 districts. USA and UK are also assisting the government to improve the aviation safety and security and in this regard, the WB is working closely with the US Department of Transportation (Safe Skies Initiative for Africa) and DfID (Department for International Development) of UK to ensure coordination and harmonization of the World Bank's involvement and avoidance of any duplication.

The Nordic Development Fund (NDF) will co-finance (under parallel financing arrangements) one of the road sections under the project and part of the road sector institutional strengthening component (support to KRB). The different sector ministries hold regular roundtable discussions with the major development partners to coordinate their activities in the infrastructure sector. A joint appraisal mission was conducted with NDF (February 2004) to agree on the components to be funded by NDF and respective implementation arrangement.

It had been the implicit agreement, in the early 1990s, that if GOK increased maintenance funding to the levels required for a sustainable road network, the donors would help to clear the back-log of reconstruction, rehabilitation and delayed periodic maintenance. Maintenance funding has increased substantially, but donor assistance has been limited to the below anticipated level. Some World Bank funding had not been materialized due to the slow preparation of the Strategic Plan. The general reduction in donor assistance to Kenya had affected negatively. However, the donor aids are recovering since the establishment of new

government in the late 2002. A good example for this recovery is the quickened progress of the Northern Corridor Transport Improvement Project by IDA/ World Bank.

From a new data, in FY 2003/04, development partners' contribution was Ksh 3.7 billion, occupying 64% of the total development budget, while the GOK contribution was Ksh 2 billion, which was 36% of the total development budget. In FY 2004/05, donor aids has a big leap arriving to Ksh 7.8 billion, 78% of the total development budget because of the Northern Corridor project, and the GOK had a slight growth in development funding arriving to Ksh 2.2 billion. As a result the ratio of GOK fund for development decreased to 22%. From the past through the present and toward a visible future, donors aids have been and shall be an important source of fund for Kenyan road development and improvement.

### **8.3 PRIVATE SECTOR PARTICIPATION: CASE OF NORTHERN CORRIDOR PROJECT**

#### **8.3.1 Overview**

Until recently, the almost universal model was that the road sector was owned, managed and financed by governments with the public sector for implementing much of the works. The role of the private sector was restricted to implementing contractor under the governments (central and local, in case of Kenya, MRPW and MOLG and local authorities) with the designs and standards established by the government. This model required large public works departments (such as the Roads Department of MRPW), large numbers of government engineers (such as engineers in RD) and usually extensive works organizations (such as the provincial works offices and district works offices belonging to RD), and equipment and plant holdings (such as the Department of Mechanical and Transport in MRPW). This was the model inherited by Kenya, and it provided good services for many years. Overtime there have been many modifications. Kenya road sector has been facing the declining effectiveness of the public sector model, and a huge and increasing financial gap in road maintenance and reconstruction.

If the government does not have enough funds and donor funding is limited, it shall be necessary to increase the level of financing from the private sector in a number of ways.

One of possible ways is the shadow road concession. In the case of the shadow toll, the private sector would be bearing the construction and maintenance cost risk, as well as a risk regarding the level of traffic. The private sector would have to evaluate the likely risks probability KRB defaulting on the payment of either the shadow toll or fixed payment schedule. On the other hand, KRB would need to evaluate the probability of the concessionaire failing to meet performance standards.

Another possible way is the toll road concession. This would be a much more controversial change to the current system of financing and managing roads in Kenya. In this case the concessionaire would be bearing the construction, maintenance and traffic risks and there would be a direct link of the road investment, the road use and the road charge. The private sector is neither a charity nor a donor partner and will not invest in Kenyan roads without the prospect of substantial profit. The private sector will be very selective, looking for the roads with high traffic volume which indicates substantial revenue earning potential.

Because Kenya needs the private sector finance to rehabilitate its road network and because the Kenya road concession is strongly recommended by development partners, particularly by the World Bank, the private sector participation, the form of road concession, was discussed and studied several years ago. The most important study in this aspect is the Kenya Road Concession Assessment implemented by BKS and financed by the World Bank. The recent BKS report put forward the concept of a toll concession for the Northern Corridor and maintenance concessions on all the other main roads with a traffic flow of 500 vehicles per day and more.

If Kenyan government adopts the proposal, the entire main road network shall be effectively placed under the private sector management and maintenance. The public sector's role shall be to monitor that whether the service standards specified in the concession agreements being satisfied. This is a very radical departure from the traditional model, but may well be an attractive way forward, if efficient road services are to be guaranteed. Therefore, the road concession of the Northern Corridor project needs to be described in details from the perspective of road financial sources.

### **8.3.2 Road Concession Possibility**

#### **(1) Project Background**

The BKS Group was awarded the study "Road Concessions in Kenya" by the World Bank in May 2001. This study consists of two phases, namely, the phase one: Assessment of concession potential, and the phase two: Design of concession framework. By November 2004, the two phases have been completed and the final reports have been submitted to the Kenyan government.

In the same line with the BKS study, the World Bank has been reviewing and preparing to implement the Northern Corridor Transport Improvement Project (NCTIP). The NCTIP is planned to consist of eight components, and the third component is the private sector participation in road management and maintenance. This component comprises: (a) technical assistance for facilitating concession of selected sections of the Northern Corridor road link;

and (b) initiating a pilot program of long-term performance based on maintenance and management of a selected sub-network (about 300 km) of lower traffic volume roads.

## **(2) Economic Considerations and Economic Impact**

Based on the BKS report, the investment on the Northern Corridor roads has very large economic impact. The proposed road construction and upgrading of the Northern Corridor are expected to increase the economic growth by 1% during the 3-year construction period. This investment is also expected to increase the gross domestic investment by 22%, the total domestic savings by 44%, and the gross domestic investment/ GDP by 4%.

Applying economic internal rate of return 22%, which is average transport projects calculated by the World Bank, the project could earn an annual return of about US\$ 77 million based on direct benefits compared to costs. If fund is borrowed domestically, upward pressure on domestic interest rates will occur due to the increased demand for fund. If fund is borrowed from abroad, the borrowing is expected to increase the domestic supply of money by 1.7% and may have consequent decreasing effect on the domestic interest rates. Considering the current balance of payment of Kenya which is net capital outflow and the Kenyan balance of the current account which is in a deficit (more than US\$ 230 million in 2000), too much overall foreign debt may prevent new foreign aid loan to be materialized. In addition, foreign borrowing is expensive in terms of local currency considering the requirement of repayment, both interest and principal, by foreign currency. Furthermore, foreign borrowing by the GOK increases its debt service obligation which is already very high enough with its financial capacity.

The use of road concession as a mechanism to finance for building road is considered appropriate for promoting equitable income distribution, since its income generation targets road users specifically who are generally regarded as more affluent members of society and in a better position to pay for roads. Concession therefore shifts the burden of paying for road development and maintenance from the general taxpayers to the road users.

From the benefit-cost considerations, road construction by means of concession with tolling is economically viable if the construction can be materialized by some years earlier than the expected case of public funding since the economic benefits can be attained earlier. The additional tolling cost is thus offset by the additional economic returns accommodated by earlier construction. The number of years for that advantage depends on variables such as pavement conditions and traffic demand.

## **(3) Technical Considerations**

The extent of the potential shadow toll network – classified roads with ADTs of 500 vehicles

per day and more excluding the roads under the Northern Corridor – is 3,792 km. The fuel levy income for the potential shadow toll network, which is US\$ 22.5 million, is sufficient to cover the estimated maintenance expenses of this network, which amounts to US\$ 22.1 million. However, the current estimated backlog of the potential shadow toll network is US\$ 360.5 million. The extent of road length for the potential conventional concession – the Northern Corridor from Mombasa to Malaba – is 922 km (excluding planned bypass for Mombasa, Nairobi and Nakuru).

#### **(4) Types of Concession Arrangements**

Basically there are three types of concession arrangements that were studied.

##### BOT Concessions Using Conventional Tolls

The most important advantage of BOT concessions based on conventional tolls is that a new source of revenue, which is toll collected from road users, is to be introduced instead of increase in extraction from existing sources. The most important disadvantages of this type are firstly that road users are affected more directly since actual tolls being levied and secondly that significant toll-related capital, operating and maintenance costs associate. Another very important disadvantage is that high return on investment is indispensable to attract private investors.

##### BOT Concessions Using shadow Tolls:

The most important advantage of BOT concessions based on shadow tolls is that road users are not affected directly by such tolls, and that the capital, operating and maintenance costs associated with the implementation are low. Further advantage of shadow tolling is that existing sources of funding are being stretched to achieve the implementation of more projects at an earlier date by effectively using private sector loan financing. The most important disadvantage is that no new funding source for additional support of shadow toll projects. Another very important disadvantage is that these projects require high return on capital investment which satisfies private investors.

##### Construction Contract Combined with Maintenance Concession (MOT: Maintain, Operate and Transfer Concession):

The most important advantage of this approach is that the funding of the initial project largely depends on traditional funding sources (foreign development partners, fuel levy income). This approach significantly reduces the fund preparation requirement of private investors comparing to a normal BOT project. Another very important advantage is that private sector expertise in funding, and in execution of road operation and maintenance is expected to be



materialized in effective manner. Disadvantage of this approach is that the initial funding depends on traditional sources which are limited.

#### **(5) Financial Considerations**

Financial evaluations were performed to determine the toll levels at which the most logical conventional road concession project, namely the Northern Corridor project, would be financially viable from the perspective of a private sector concessionaire. Financial evaluations were performed for the three scenarios:

S1: Northern Corridor (A109/A104 Mombasa - Malaba);

S2: Northern Corridor East (A109 Mombasa - Nairobi);

S3: Northern Corridor West (A104 Nairobi - Malaba);

The financial results obtained indicated acceptable DSCRs(Debt Service Cover Ratio)( $> 1.25$ ) as well as high IRRs ( $> 28\%$  pa) for all scenarios.

The affordability of toll tariffs is an essential prerequisite for the viability of a conventional concession. Affordability is assumed if the direct short-term benefits exceed the toll tariffs by a reasonable margin, which was the case for all conventional toll scenarios. Financial evaluations were further performed for all classified road with average daily traffic volumes above 500 vpd to determine the shadow toll levels at which the most logical roads i.e. higher traffic volume roads, would be financially viable from the perspective of a private sector concessionaire. Financial evaluations were performed for the following scenarios:

S4: All classified roads with ADT volumes above 500 vpd; and

S5: All classified roads with ADT volumes above 500 vpd excluding northern corridor (A109/A104 Mombasa-Nairobi-Malaba).

The financial results obtained indicated acceptable DSCRs ( $> 1.25$ ) as well as high IRRs ( $> 28\%$  pa) for both scenarios. However, the revenue streams required by the Concessionaire from the GOK or its development partners for these shadow-tolling scenarios were significant.

# **APPENDIX 10**

## **TRAFFIC SURVEY AND ANALYSIS**

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### APPENDIX 10 TRAFFIC SURVEY AND ANALYSIS

#### 10.1 TRAFFIC SURVEY LOCATION AND ZONING SYSTEM

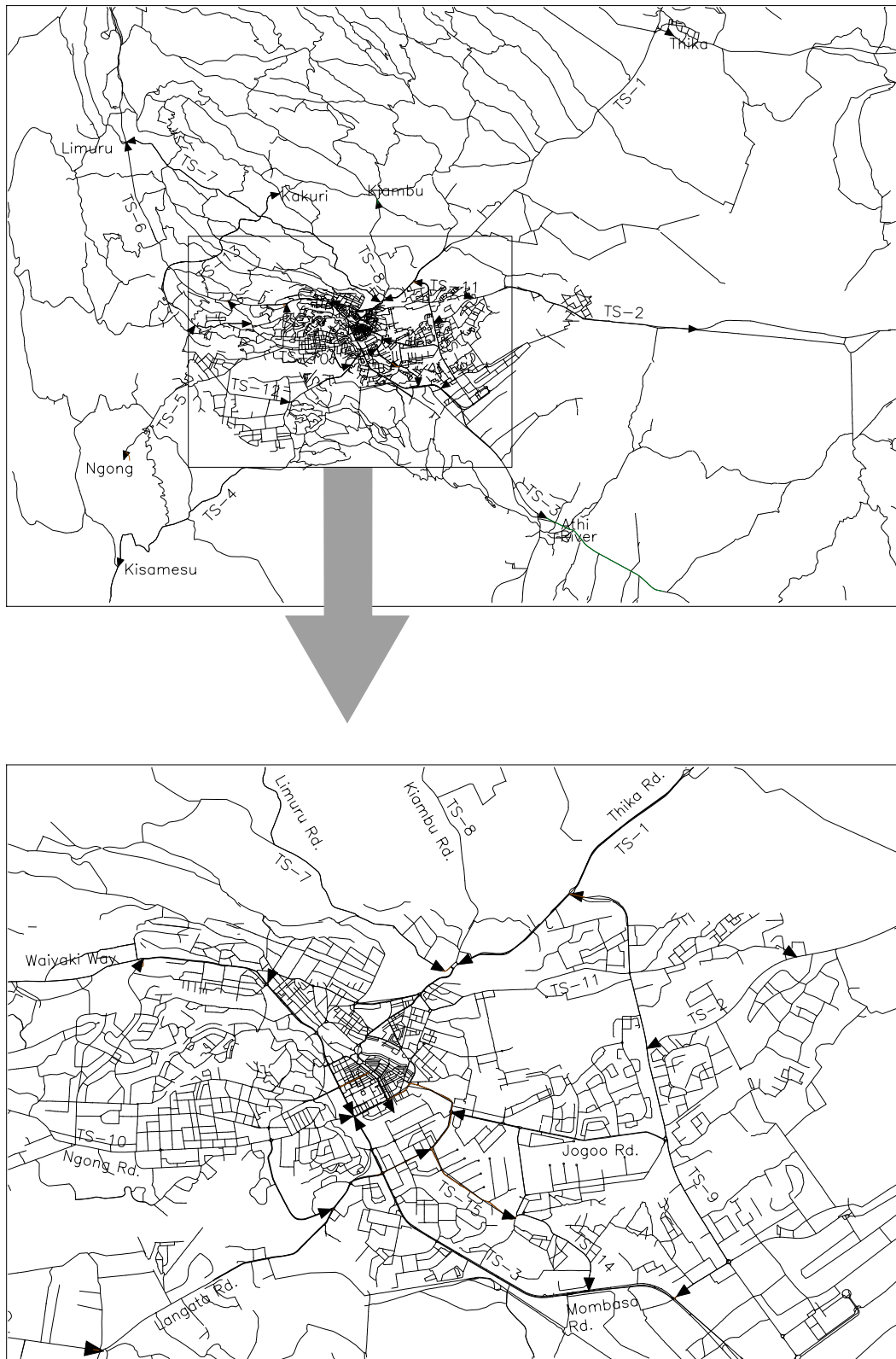
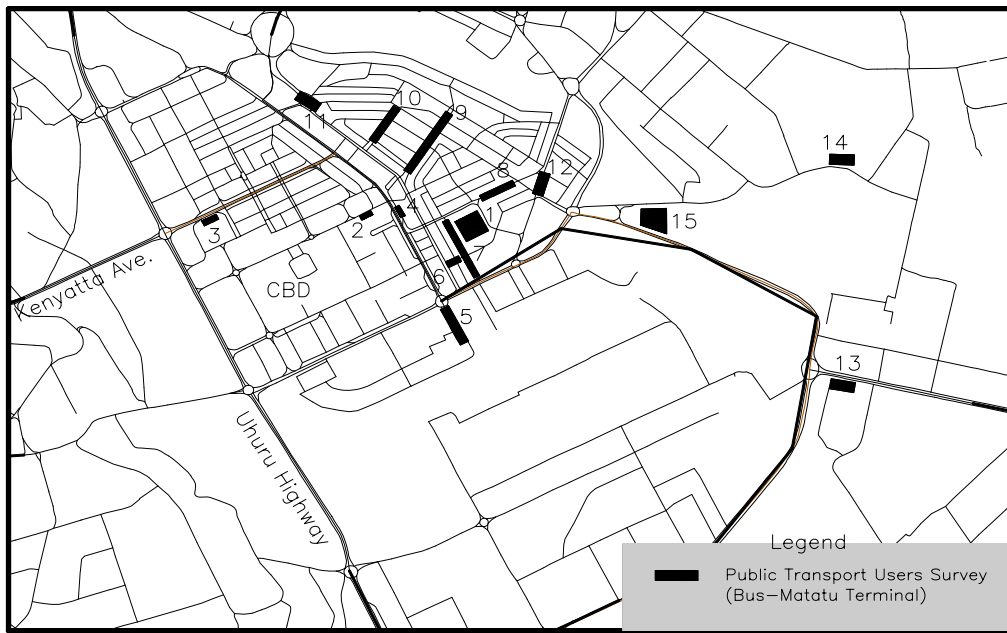


FIGURE 10.1-1 TRAFFIC SURVEY LOCATIONS (TRAVEL SPEED SURVEY)



**FIGURE 10.1-2 TRAFFIC SURVEY LOCATIONS  
(PUBLIC TRANSPORT USERS SURVEY)**

TABLE 10.1-1(1) ZONING SYSTEM (NAIROBI) 1/3

Small Zoning System			Midium Zoning System		Large Zoning System	
No.	Zone Code	Sub-location	Zone Code	Location(TAZ)	Zone Code	Division
1	1	City center1	1	Starehe1	1	Central
2	2	City center2				
3	3	City center3				
4	4	City square1	2	Starehe2		
5	5	City square2				
6	6	City square3				
7	7	Pangani	3	Kariokor		
8	8	Ziwani/Kariokor				
9	9	Mathare	4	Mathare		
10	10	Mabatini				
11	11	Mlango Kubwa				
12	12	Kia Maiko	5	Haruma		
13	13	Huruma				
14	14	Ngara East	6	Ngara		
15	15	Ngara West				
16	16	Makongeni/Kaloleni	7	Makongeni	2	Makadara
17	17	Harambee	8	Makadara		
18	18	Hamza/Lumumba				
19	19	Mbotela	9	Maringo		
20	20	Ofafa Maringo				
21	21	Landi Mawe1	10	Viwandani		
22	22	Landi Mawe2				
23	23	Viwandani				
24	24	Hazina	11	Mukuru Nyayo		
25	25	Nairobi South				
26	26	Kariobangi North	12	Kariobangi	3	Kasarani
27	27	Baba dogo				
28	28	Gotathuru	13	Korogocho		
29	29	Nyayo				
30	30	Kiwanja	14	Kahama		
31	31	Kahama West/Juak /Kongo Soweto				
32	32	Githurai/Kamuthi	15	Githurai		
33	33	Mathare 4A	16	Ruaraka		
34	34	Utalii				
35	35	Mathare North				
36	36	Roysambu/Njathaini	17	Roysambu		
37	37	Garden				
38	38	Mwiki	18	Kasarani		
39	39	Kasarani				

TAZ: Traffic Analysis Zone(refer to Chapter 12)

TABLE 10.1-1(2) ZONING SYSTEM (NAIROBI) 2/3

Small Zoning System			Midium Zoning System		Large Zoning System	
No.	Zone Code	Sub-location	Zone Code	Location(TAZ)	Zone Code	Division
40	40	Embakasi	19	Embakasi	4	Embakasi
41	41	Mihang'o				
42	42	Mukurukwa Njenga	20	Mukurukwa Njenga		
43	43	Imara Daima				
44	44	Umoja	21	Umoja		
45	45	Savannah				
46	46	Kayole	22	Kayole		
47	47	Komarock				
48	48	Njiru	23	Njiru		
49	49	Maili Saba				
50	50	Dandora 'A'	24	Dandora		
51	51	Dandora 'B'				
52	52	Kariobangi South /Mowlem	25	Kariobangi S		
53	53	Ruai	26	Ruai		
54	54	Ngundu				
55	55	Airbase	27	Eastleigh North	5	Pumwani
56	56	Eastleigh North				
57	57	Eastleigh South	28	Eastleigh South		
58	58	California				
59	59	Majengo/Gorofani /Bondeni/Gikomba	29	Punwani		
60	60	Kimathi	30	Bahati		
61	61	Uhuru				
62	62	Shauri Moyo	31	Kamukunji		
63	63	Muthurwa/Kamukunji				
64	64	Upper parklands/ Spring Valley	32	Parklands		
65	65	Loresho/Kyuna	33	Kitisuru		
66	66	Kitisuru				
67	67	Muthaiga	34	Highridge		
68	68	Karura				
69	69	Highridge1				
70	70	Highridge2	35	Kangemi		
71	71	Gihagi				
72	72	Mountain View				
73	73	Kangemi	36	Kilimani		
74	74	Kilimani1				
75	75	Kilimani2				
76	76	Kilimani3				
77	77	Kilimani4				
78	78	Kileleshwa	37	Lavington		
79	79	Muthangari1				
80	80	Muthangari2				
81	81	Maziwa				

TAZ: Traffic Analysis Zone(refer to Chapter 12)

**TABLE 10.1-1(3) ZONING SYSTEM (NAIROBI) 3/3**

Small Zoning System			Midium Zoning System		Large Zoning System			
No.	Zone Code	Sub-location	Zone Code	Location(TAZ)	Zone Code	Division		
82	82	Waitthaka	38	Waitthaka	7	Dagoretti		
83	83	Mutuini/Kirigu	39	Mutuini				
84	84	Ruthimitu	40	Uthiru/Ruthimitu				
85	85	Uthiru						
86	86	Kawangware	41	Kawangware				
87	87	Gatina						
88	88	Riruta	42	Riruta				
89	89	Ngando						
90	90	Kenyatta1	43	Kenyatta				
91	91	Kenyatta2						
92	92	Golf Course	44	Golf Course				
93	93	Woodley						
94	94	Kibera/Makina	45	Kibera			8	Kibera
95	95	Silanga/Lindi						
96	96	Langata/Hardy	46	Langata/Karen				
97	97	Karen/Lenana						
98	98	Mugumoini/Bomas	47	Mugumoini				
99	99	Nairobi West	48	Nairobi West				
100	100	South 'C'	49	Laini Saba				
101	101	Laini Saba						
102	102	Nyayo Highrise	50	Sera Ngombe				
103	103	Gatwikira						
104	104	Olympic						

TAZ: Traffic Analysis Zone(refer to Chapter 12)

**TABLE 10.1-1(4) ZONING SYSTEM (THIKA, KIAMBU, KAJIADO, MACHAKOS)**

Small Zoning System			Midium Zoning System		Large Zoning System			
No.	Zone Code	Location	Zone Code	Division	Zone Code	District		
105	1001	Thika Municipal	51	Municipality	9	Thika		
106	1002	Gatwanyaga						
107	1003	Samuru					52	Kakuzi
108	1004	Juja					53	Ruiru
109	1005	Riuru1						
110	1006	Riuru2						
111	2001	Kikuyu, Kinoo, Karai	53	Kikuyu	10	Kiambu		
112	2002	Muguga, Kabete, Nyathuna						
113	2003		55	Limuru				
114	2004	Ruaka, Kiambaa, Kihara	56	Kiambaa				
115	2005	Kiambaa S/area, Waguthu, Ting'ang'a, Riabai, Kamiti						
116	2006	Ndumberi, Cianda						
117	2007	Ikinu	57	Githunguri				
118	3001	Ngong, Ooloolua	58	Ngong	11	Kajiado		
119	3002	S. Keekonyoike						
120	3003	Kiserian						
121	3004	Ongata Rongai, Nkaimoronya						
122	3005	Kitenkela					59	Central
123	4001	Kyeleni, Kyanzavi	60	Matunguru	12	Machakos		
124	4002	Koma rock						
125	4003	Kalandini, Tala, Matungulu, Nguluni						
126	4004						61	Kangundo
127	4005	Katani	62	Mavoko				
128	4006	Lukenya1						
129	4007	Lukenya2						
130	4008	Settled area						



**TABLE 10.1-1(5) ZONING SYSTEM (OUT OF THE STUDY AREA)**

Small Zoning System			Midium Zoning System		Large Zoning System	
No.	Zone Code	Location	Zone Code	Division	Zone Code	Province
131	5001	Kakuzi(excluded Sumuru) Ithanga, Mitumbir	63	Thika	13	CENTRAL
132	5002	Gatanga, Gatundu, Kamwangi				
133	5003	Githwnguri(excluded Ikinu) Lari				
134	5004	Central, Ndithini, Nwala, Kalama	65	Machakos		EASTERN
135	5005	Kathian(ecluded Mitaboni) Yatla, Masinga, Yathui				
136	5006	Ngong(C. Keekoniyoike, Mosiro) Central(excluded Kitenkela) Magadi, Mashuru, Namanga, Loitokitok	66	Kajiado		R/VALLEY

Small Zoning System			Midium Zoning System		Large Zoning System	
No.	Zone Code	Division	Zone Code	Province	Zone Code	Country
137	6001	Nyandarua	67	CENTRAL	14	KENYA
138	6002	Kirinyaga, Murang'a, Nyeri, Maragua				
139	6003	Makueni				
140	6004	Kitui, Mwingi	68	EASTERN		
141	6005	Embu, Mbeere, Meru Central, Tharaka, Nithi(Meru S.)				
142	6006	Isiolo, Marsabit, Meru North, M				
143	6007	Kilifi, Kwake, Lamu, Monbasa, Taita taveta, Tana river, Malindi	69	COAST		
144	6008	all				
145	6009	Narok, Trans mara	71	R/VALLEY		
146	6010	Nakuru				
147	6011	Bomet, Kericho, Keiyo, Koibatek, Nandi, Trans nzoia, Uasin Gishu, Baringo, Marakwet, Turkana, West Pokot, Laikipia, Samburu				
148	6012	all	72	NYANZA, WESTERN		
149	7001		73		15	TANZANIA
150	7002					UGANDA
151	7003					SUDAN
152	7004					ETHIOPIA
153	7005					SOMALI

10.2 PERSON TRIP SURVEY

10.2.1 Person Trip Survey Form

**NUTrans HIS Questionnaire Form**

**FORM 1: HOUSEHOLD INFORMATION**

**OFFICIAL USE**

Name of surveyor					
Name of supervisor					
Name of coder					
Name of encoder					
Name of area coordinator					
Date of survey (dd:mm)					
Date of trips surveyed (dd:mm)					
Household No.					

**INSTRUCTION: To be completed by HEAD of HOUSEHOLD**

(1) ADDRESS OF HOUSEHOLD

No. / Building       Street       Estate / District

City / Municipality

(2) HOW MANY PEOPLE RESIDE IN YOUR HOUSEHOLD?

	Under 5yrs. old	5yrs. and above	Household Helpers (ex. Maid)
Male			
Femal			
Total			

(3) WHAT IS THE TOTAL MONTHLY HOUSE-HOLD INCOME? (pls. check one)

<input type="checkbox"/>	1. Under Kshs1,999
<input type="checkbox"/>	2. Kshs2,000-4,999
<input type="checkbox"/>	3. Kshs5,000-9,999
<input type="checkbox"/>	4. Kshs10,000-14,999
<input type="checkbox"/>	5. Kshs15,000-19,999
<input type="checkbox"/>	6. Kshs20,000-29,999
<input type="checkbox"/>	7. Kshs30,000-39,999
<input type="checkbox"/>	8. Kshs40,000-49,999
<input type="checkbox"/>	9. Kshs50,000-99,999
<input type="checkbox"/>	10. Kshs100,000 OVER

(4) HOW MANY VEHICLES ARE OWNED BY HOUSEHOLD

TYPE	NO. OF UNITS
1. BICYCLE	
2. MOTOR CYCLE	
3. CAR /4WD	
4. TRUCK	
5. OTHERS	

(5) HOW MANY VEHICLES ARE RENTED BY COMPANY OR GOVERNMENT

TYPE	NO. OF UNITS
1. BICYCLE	
2. MOTOR CYCLE	
3. CAR /4WD	
4. TRUCK	
5. OTHERS	

(6) OWNERSHIP OF HOUSE AND LAND

	OWN	RENTED	P/MONTH
HOUSE and LAND	<input type="text"/>	<input type="text"/>	Kshs <input type="text"/>

(7) LENGTH OF STAY IN PRESENT HOUSE

YEARS

(8) RACE OF INFORMANT

<input type="checkbox"/>	1. AFRICAN
<input type="checkbox"/>	2. ASIAN
<input type="checkbox"/>	3. EUROPEAN
<input type="checkbox"/>	4. MIXED ORIGIN

FIGURE 10.2-1(1) PERSON TRIP SURVEY SHEET

**FORM 2: HOUSEHOLD MEMBER INFORMATION**

<b>OFFICIAL USE</b>	HOUSEHOLD No.				ID No.	

**INSTRUCTION: To be completed for every HOUSEHOLD MEMBER aged 5yrs, and above**

(1) AGE \_\_\_\_\_ (2) SEX: (pls check) Male  Female

(3) WORK ADDRESS

No. / Building	Street	Estate / District	
City / Municipality			

(4) SCHOOL ADDRESS

No. / Building	Street	Estate / District	
City / Municipality			

(5) OCCUPATION  
(Pls Encircle)

1. Officials of Govt. & Special Interest Org., Corporate Exec., Mangers, Managing
2. Professionals
3. Technical & Assoc. Professionals
4. Clerical Worker
5. Service Workers & Shop & Market Workers
6. Farmers, Forestry Workers & Fisherman
7. Traders & Related Workers
8. Plant & Machine Operators & Assemblers
9. Laborers & Unskilled Workers
10. Teacher & School Workers
11. Student (Elem.)
12. Student (H.S. & Univ.)
13. Housewife
14. Jobless
15. Others, specify \_\_\_\_\_

(6) EMPLOYMENT SECTOR  
(Pls Encircle)

1. Agriculture, Hunting & Forestry
2. Fishing
3. Mining & Quarrying
4. Manufacturing
5. Electricity, Gas & Water Supply
6. Construction
7. Wholesales & Retail Trade; Repair of Motor Vehicles Motorcycles, Personal & Household Goods
8. Hotels & Restaurants
9. Transport, Storage & Comm.
10. Financial Intermediation
11. Real Estate, Renting & Business Activities
12. Public Adm. & Defense
13. Education
14. Health & Social Work
15. Other Community, Social & Personal Service
16. Private Households
17. Extra-territorial Organizations

(7) MONTHLY INCOME  
(Pls Encircle)

1. Under Kshs1,999
2. Kshs2,000-4,999
3. Kshs5,000-9,999
4. Kshs10,000-14,999
5. Kshs15,000-19,999
6. Kshs20,000-29,999
7. Kshs30,000-39,999
8. Kshs40,000-49,999
9. Kshs50,000-99,999
10. Kshs100,000 OVER

(8) DRIVER'S LICENSE HELD.

1. Yes       2. No

**FIGURE 10.2-1(2) PERSON TRIP SURVEY SHEET**

**FORM 3: TRIP INFORMATION**  
**INSTRUCTION: To be completed for every HOUSEHOLD MEMBER aged 5yrs, and above**

<b>ORIGIN AND DESTINATION</b> 1. Residence (Home) 2. Commercial Institution 3. Office / Bank 4. Factory / warehouses 5. School / Universities Educational 6. Recreational Place, Park 7. Medical and Welfare 8. Religious and Social 9. Wholesale and Retail Shop 10. Restaurant / Entertainment 11. Others	<b>TRIP INFORMATION</b>		1st TRIP		2nd TRIP	
	(1) ORIGIN Where did this trip begin?  (Give address/land mark, famous bldg. nearby)	_____ No. /Building Street  _____ Estate/District City  a. <input type="text"/> <input type="text"/> <input type="text"/>		INFORMATION IS  AS IN  OF 1st TRIP		
	(2) INSTITUTION of ORIGIN	b. <input type="text"/>	b. <input type="text"/>			
	(3) TIME STARTED	c. : _____ AM <input type="text"/> Hours Minutes PM <input type="text"/>	c. : _____ AM <input type="text"/> Hours Minutes PM <input type="text"/>			
	(4) TIME of ARRIVAL	d. : _____ AM <input type="text"/> Hours Minutes PM <input type="text"/>	d. : _____ AM <input type="text"/> Hours Minutes PM <input type="text"/>			
	(5) INSTITUTION of DESTINATION	e. <input type="text"/>	e. <input type="text"/>			
	<b>TRIP PURPOSE</b> 1. To Home 2. To Work 3. To School 4. Personal Business 5. Firm Business 6. Social 7. Shopping 8. Others	(6) DESTINATION Where did this trip end?  (Give address/land mark, famous bldg. nearby)	_____ No. /Building Street  _____ Estate/District City  f. <input type="text"/> <input type="text"/> <input type="text"/>		_____ No. /Building Street  _____ Estate/District City  f. <input type="text"/> <input type="text"/> <input type="text"/>	
		(7) TRIP PURPOSE	g. <input type="text"/>	g. <input type="text"/>		
		<b>MODE of TRAVEL</b> 1. Walking 2. Bicycle 3. Motor Cycle 4. Tricycle 5. Matatu 6. Metro Shuttle 7. Bus 8. Taxi 9. Private Car 10. School/ Co./Tourist Bus 11.Truck 12.Trailer 13. KR (Railway) 14.Others	(8) MODE of TRAVEL	Original Mode	TRANSFER POINT	Original Mode
	(9) TRANSFER If you transferred to another vehicle / mode of travel during the trip, state the mode you changed to and the place. (Give street intersection/ famous bldg. or land mark).		Next Mode	1st Transfer	Next Mode	1st Transfer
			Next Mode	2nd Transfer	Next Mode	2nd Transfer
Next Mode			3rd Transfer	Next Mode	3rd Transfer	
Next Mode			4th Transfer	Next Mode	4th Transfer	
(10) DRIVER or PASSENGER (only for Passenger Car)	h. <input type="text"/>	h. <input type="text"/>				
(11) No. of PASSENGER (only for Passenger Car)	i. <input type="text"/>	i. <input type="text"/>				

If Driver write D  
If Passenger write P

If Mode of TRAVEL is Private car write No. of passenger

FIGURE 10.2-1(3) PERSON TRIP SURVEY SHEET

10.2.2 Survey Results

Modal Share by Trip Purpose

The share of “walking” mode to trip “to work” is just 29% which is the lowest among all trip purposes. Figure 10.2-1 shows the mode composition of each trip purpose.

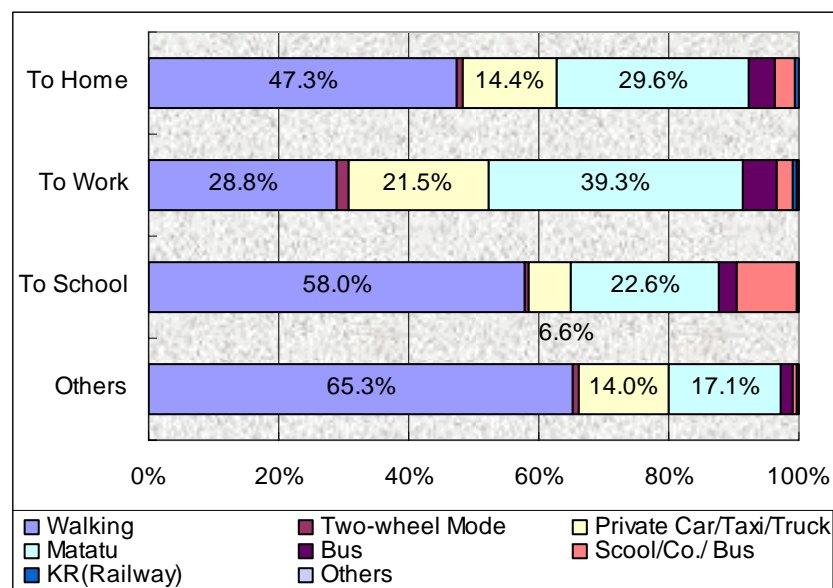


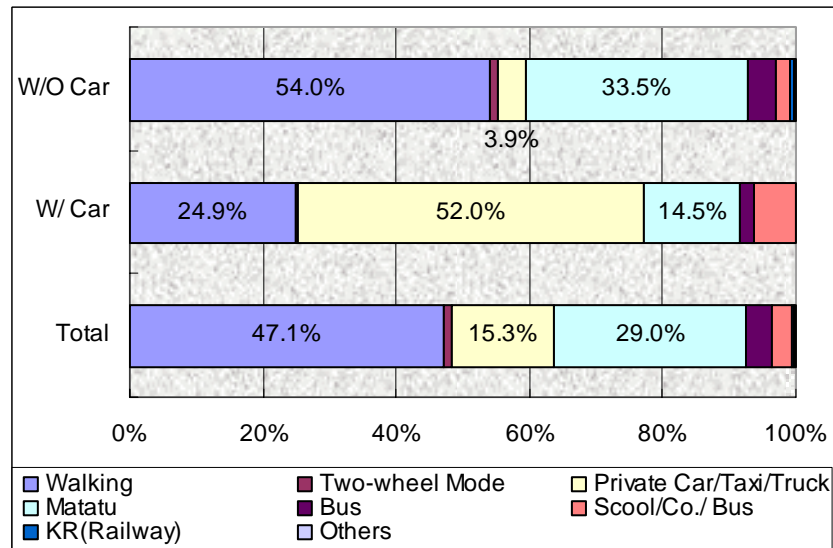
FIGURE 10.2-1 MODAL SHARE BY TRIP PURPOSE

TABLE 10.2-1 MODAL SHARE BY TRIP PURPOSE

	HOME	WORK	SCHOOL	OTHERS	TOTAL
Walking	1,060,324	347,110	273,457	586,388	2,267,280
Two-wheel Mode	23,701	22,314	2,052	7,344	55,411
Private Car/Taxi/Truck	321,594	259,471	30,917	125,720	737,702
Matatu	662,547	473,796	106,656	153,406	1,396,405
Bus	87,232	60,085	14,068	17,684	179,068
School/Co./ Bus	72,094	29,241	43,545	5,415	150,296
KR(Railway)	9,998	10,158	759	617	21,533
Others	3,202	2,750	209	1,600	7,762
Total	2,240,692	1,204,926	471,665	898,174	4,815,457

Modal Share by Car Ownership

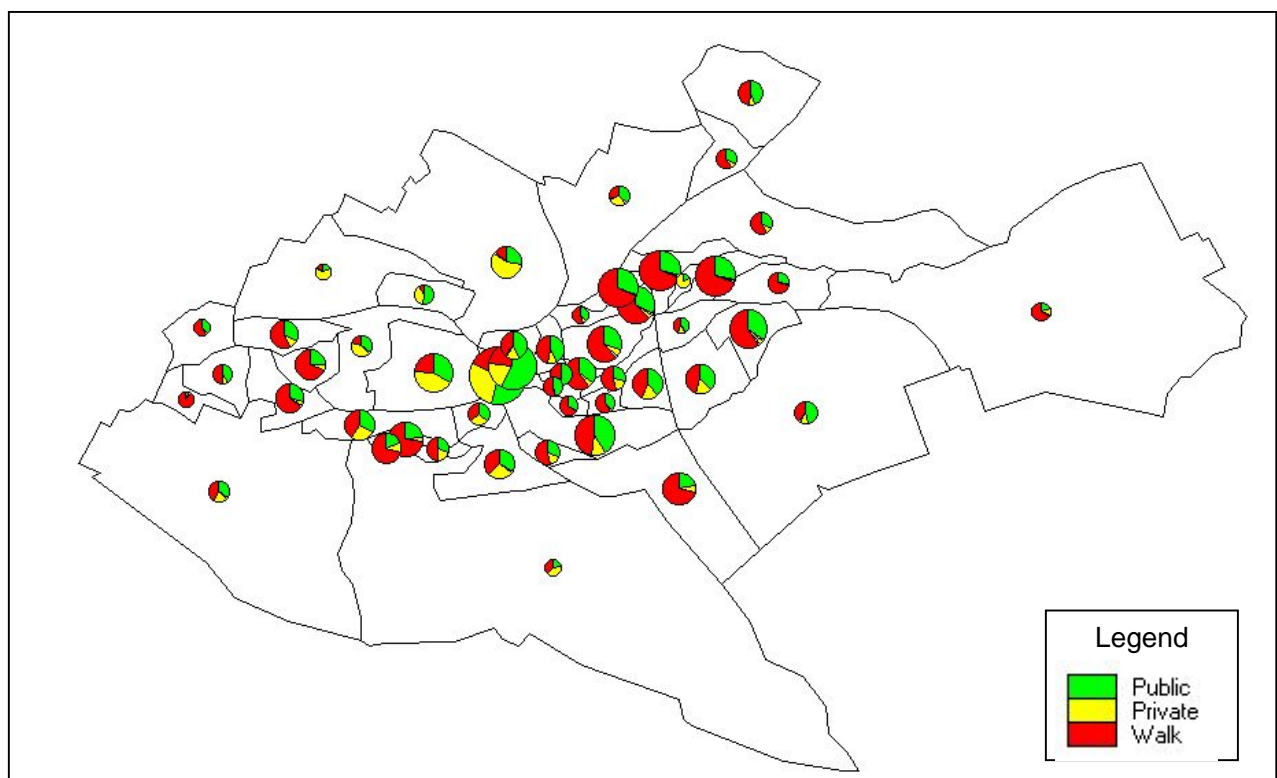
As expected, the modal share of “private car/taxi/truck” is very high at 52% to “with car” household. “walking” is the main mode of “without car” household which stands at 54%.



**FIGURE 10.2-2 MODAL SHARE BY CAR OWNERSHIP**

Modal Share by Zone

Private mode (car and taxi) share in the west area is higher than the other areas. While the share of public mode in the east area is high.



**FIGURE 10.2-3 MODAL SHARE BY ZONE (ORIGIN ZONE BASE)**

Trip Rate by Personal Attribute

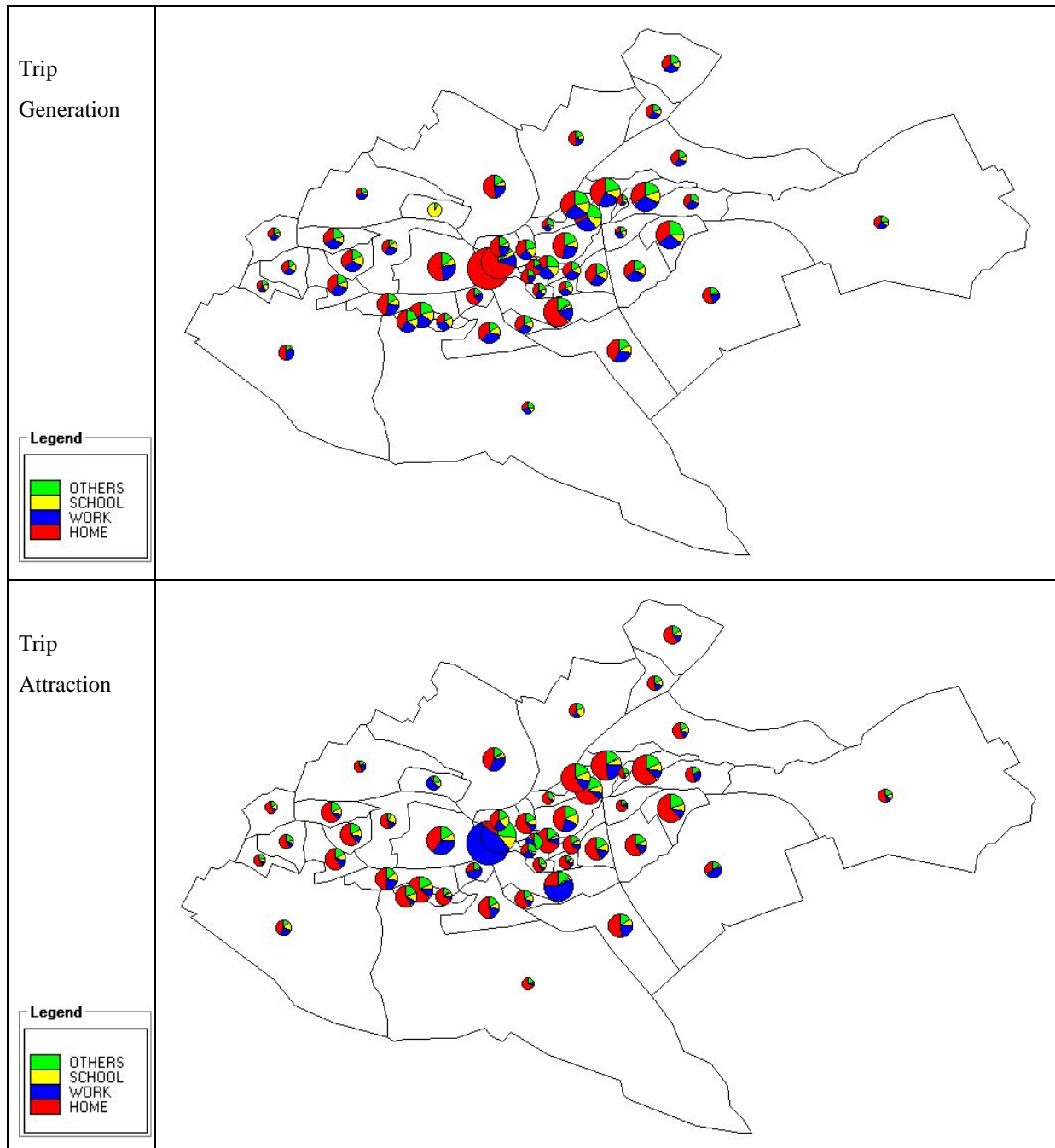
As for the trip rate by gender, the trip rate of male is higher than that of female. The former trip rate is 2.44 trips while the latter is 2.04 trips. As for the occupation, employee is the highest among them, and by household car ownership, with-car household is higher than those without-car. Comparing that by household income class, high income group is the largest among them.



**FIGURE 10.2-4 TRIP RATE BY PERONAL ATTRIBUTE**

Trip Generation and Attraction

Excluding home trips, which are generally generated and attracted based on zonal population, other trip purposes have different characteristics. Work trips are generating in large scale from residential areas since their occurrences correlate with the size of the population. The volume of attraction is high in employment areas, such as the central commercial and business area as well as in the industrial areas.

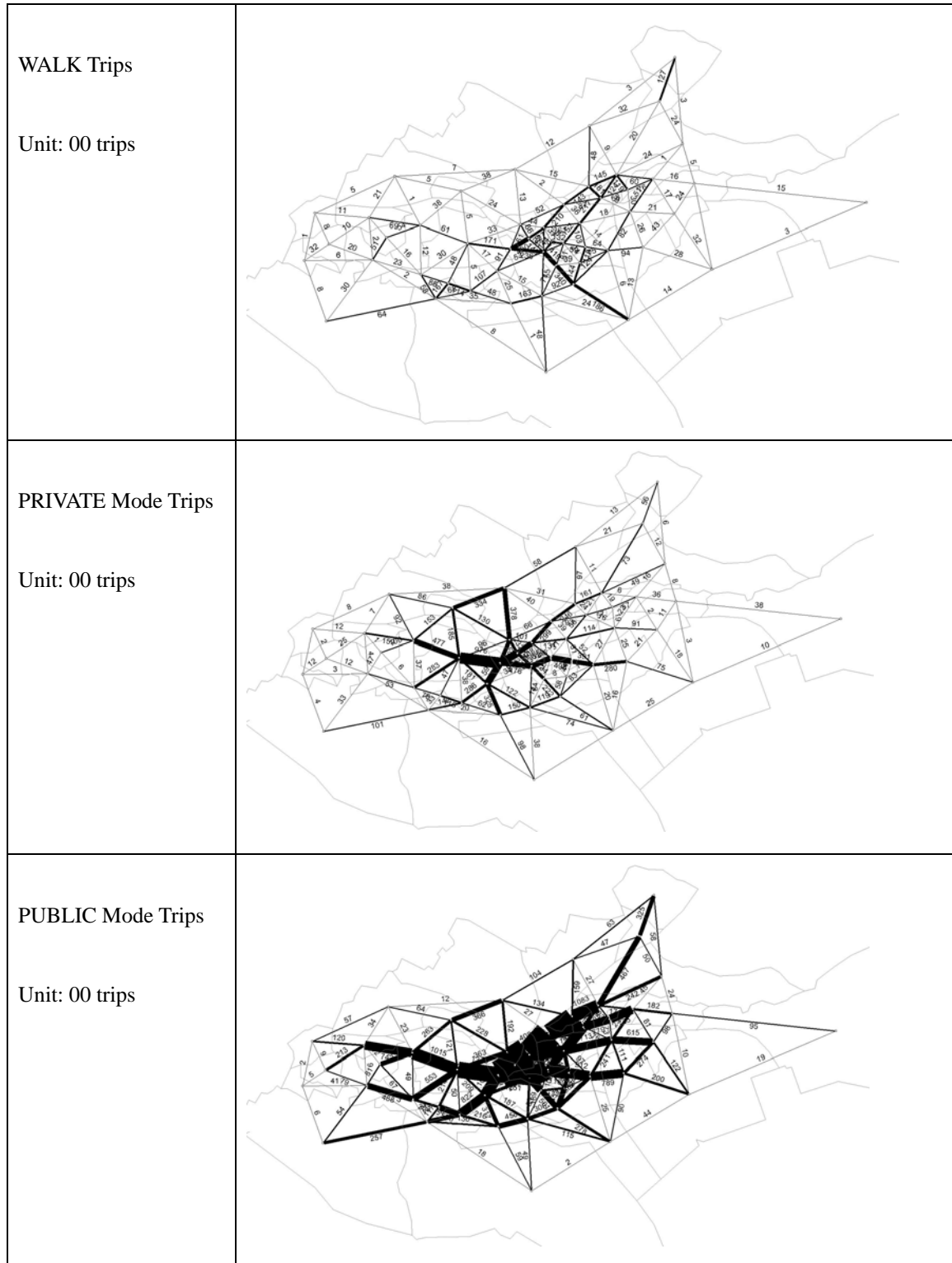


**FIGURE 10.2-5 TRIP GENERATION AND ATTRACTION BY TRIP PURPOSE**



Trip Distribution by Travel Mode

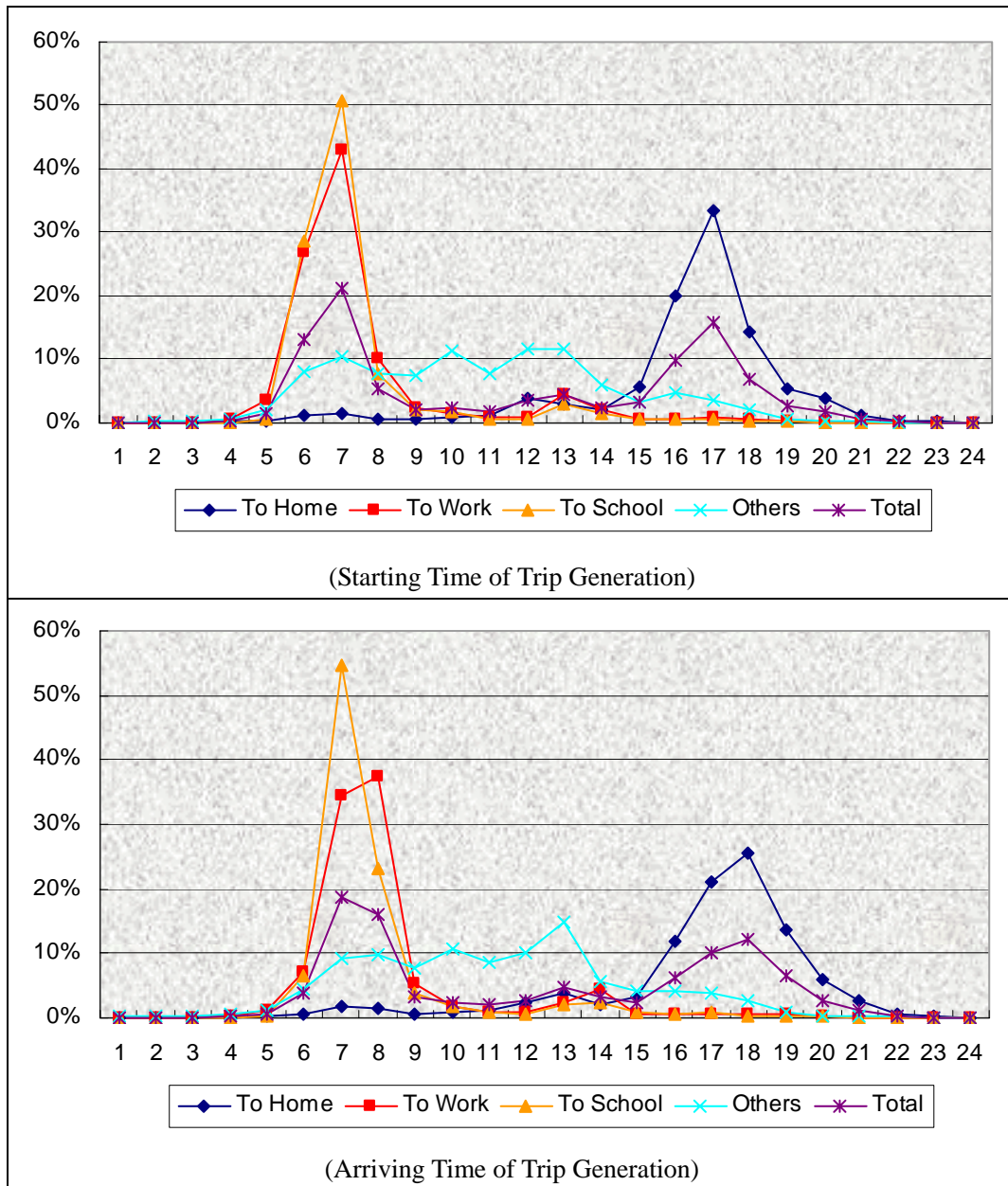
The flow patterns by travel mode is generally the same as the total trip pattern. Private mode trip flows increase in volume at the west area (WESTLANDS) and Public mode trip flows increase at the east area (KASARANI and EMBAKASI).



**FIGURE 10.2-6 TRIP DISTRIBUTION BY TRAVEL MODE**

Departure and Arrival Time of Trips

Most of WORK and SCHOOL trips start between 6:00 and 7:00 and arrive at 7:00 to 8:00. The morning peak ratio is 43% in WORK trip departure, and 51% in SCHOOL trip. The peak ratio of arrival time is 38% in WORK trip, and 54% in SCHOOL trip. In addition, the evening peak is considered between 16:00 to 18:00 and the ratio is lower than the morning peak.



**FIGURE 10.2-7 STARTING AND ARRIVING TIME OF TRIPS**