**Theory of Road Asset Management**

**What is Asset Management**

A systematic process of effectively maintaining, upgrading and operating assets, combining engineering principles with sound business practice and economic rationale, and providing the tools to facilitate a more organised and flexible approach to making decisions necessary to achieve the public's expectations.

In the light of these broad definitions, road asset management means managing a road network (roads, bridges, traffic facilities, etc) to satisfy the requirements of business and private road users, at the lowest possible cost over a long periodof time.

**Identified Road Related Assets**

|  |  |  |
| --- | --- | --- |
| **It. No.** | **Asset Category** | **Asset types** |
| 1 | Road way | 1. Carriage way 2. Shoulder 3. Foot Path 2. 4. Parking Lanes 5. Bus Stop |
| 2 | Bridge & Culverts | 1. Bridges 2. Pipe Culverts 3.Slab Culverts 4.Fords |
| 3 | Side drains | 1. Ditches (Paved & Unpaved) 2.Turnout Ditches 2. Secondary (Furrow Ditches) |
| 4 | Road side Furniture | 1. Guide Posts 2. Km Posts 3. Railings |
| 5 | Signs & Markings | 1. Traffic Signs 2. Lane Markings |
| 6 | Tunnels | - |
| 7 | Retaining walls & Check Dams | - |
| 8 | Road Arboriculture |  |
| 9 | “Right” of Way |  |

**Somali Regional State Road & Transport Bureau**

**Road Asset Management (RAM) Core Process**

The Road Asset Management (RAM) core process is one of core processes under the Engineering section of SRS Roads &Transport Bureau and its objectives and responsibilities stated below:

1. **Network defining**

* ***Road List***
* ***Road inventory***

1. **Planning**

* ***Rapid Condition Survey***
* ***Identifying the roads required to maintain***
* ***Submit a request and receive a budget.***
* ***Recording defects and identifying required activities***
* ***Schedule and package the activities ready for implementation****.*

1. **Implementation**

* ***Implementing the maintenance works***

**The list of the Roads in the SRS Roads Network**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Somali Roads & Transport Bureua** | | | | | | | | | | | | | | | | |  |
|  | **Road Asset Management Core Process** | | | | | | | | | | | | | | | | |  |
|  | **The list of the Roads in the ESRS Roads Network** | | | | | | | | | | | | | | | | |  |
|  |  | | |  |  | |  | | |  | |  | |  | |  |  |  |
| **S. No.** | **Road Section** | | | | **Road Length** | | **Design** | | | **Carriage** | | **Pavement Type** | | **Year of Construction** | | **Contractor** | **Years Maintained** | **Pavement Condition** |
| **Origine** | | **Destination** | | **Standard** | | | **Width** | |
| 1 | Jigjiga | | Tulli | | 30 | | DS6 | | | 6 | | Gravel | | 2003 | | Ethio-Global | 2006 | poor |
| 2 | Jigjiga | | Jinaseni | | 25 | | DS6 | | | 6 | | Gravel | | 2004 | | Own force | 2008 | fair |
| 3 | Amadle | | Quarantine | | 5 | | DS6 | | | 6 | | Gravel | | 2006 | | Own force | - | good |
| 4 | Kebribeyah | | Hartasheik | | 20 | | DS6 | | | 6 | | Gravel | | 1977 | | WWCE | 2006 | poor |
| 5 | Tulli | | Jare | | 9 | | DS6 | | | 6 | | Gravel | | 2003 | | Ethio-Global | 2008 | good |
| 6 | Jare | | Dambel | | 26 | | DS6 | | | 6 | | Gravel | | 2007 | | SRC E | - | good |
| 7 | Afdem | | Biki | | 38 | | DS6 | | | 6 | | Gravel | | 2004 | | Own force | - | very poor |
| 8 | Afdem | | Alijir | | 53 | | DS6 | | | 6 | | Gravel | | 2003 | | Own force | - | very poor |
| 9 | Alijir | | Danlahelay | | 85 | | DS6 | | | 6 | | Gravel | | 2003 | | Own force | - | poor |
| 10 | Biki | | Hanweele | | 50 | | DS6 | | | 6 | | Gravel | | 2004 | | Own force | - | poor |
| 11 | Durre | | Adigala | | 60 | | DS6 | | | 6 | | Gravel | | 2005 | | Own force | 2009 | good |
| 12 | Ararso | | Yoale | | 60 | | DS6 | | | 6 | | Gravel | | 2004 | | SRC E | - | good |
| 13 | Birkod | | Garbo | | 70 | | DS6 | | | 6 | | Gravel | | 2006 | | SPCWSSE | - | good |
| 14 | Fik | | Sagag | | 45 | | DS6 | | | 6 | | Gravel | | 2007 | | SPCWSSE | - | poor |
| 15 | Kebridahar | | Kudumbur | | 50 | | DS6 | | | 6 | | Gravel | | 2006 | | SPCWSSE | - | poor |
| 16 | Godcusbo | | Barey | | 70 | | DS6 | | | 6 | | Gravel | | 2004 | | Own force | 2007 | poor |
| 17 | Hargelle | | Jarati | | 40 | | DS6 | | | 6 | | Gravel | | 1977 | | WWCE | 2009 | good |
| 18 | Jarati | | Celkari | | 65 | | DS6 | | | 6 | | Gravel | | 1998 | | SATCON | - | good |
| 19 | Qarsadule | | Sorra | | 80 | | DS6 | | | 6 | | Gravel | | 2005 | | Own force | - | poor |
| 20 | Hudet | | Jilanqo | | 50 | | DS6 | | | 6 | | Gravel | | 2006 | | BIGBANG | 2009 | good |
| 21 | Moyal | | Ley | | 30 | | DS6 | | | 6 | | Gravel | | 2008 | | Own force | - | fair |
| 22 | Elkari | | Imey | | 120 | | DS6 | | | 6 | | Gravel | | 1998 | | SATCON | 2010 | good |
| 23 | Imey | | Raso | | 50 | | DS6 | | | 6 | | Gravel | | 1998 | | SATCON | 2010 | good |
| 24 | Barmil | | Duhun | | 34 | | DS6 | | | 6 | | Gravel | | 2009 | | SRC E | - | good |
| 25 | Ayile | | Sadey | | 115 | | DS6 | | | 6 | | Gravel | | 2009 | | SRC E | - | good |
| 26 | Dagahbour | | d/madow | | 70 | | DS6 | | | 6 | | Gravel | | 2010 | | SPCWSSE | - | good |
| 27 | Jigjiga | | Samakab | | 73 | | DS6 | | | 6 | | Gravel | | 2010 | | SPCWSSE | - | good |
| 28 | | Derida | Bermil | | | 35 | | DS6 | 6 | | Gravel | | 2012 | | SRC E | | - | good |
| 29 | | Karamarda | shabeley | | | 10 | | DS6 | 6 | | Gravel | | 2011 | |  | | - | good |
| 30 | | Fik | Mayamuluko | | | 45 | | DS6 | 6 | | Gravel | | 2005 | | Own force | | - | very poor |
| 31 | | Aysha'a | Durdur | | | 30 | | DS6 | 6 | | Gravel | | 2006 | | Own force | | 2012 | good |
| 32 | | Kebribayah | Buladeri | | | 80 | | DS6 | 6 | | Gravel | | 2012 | |  | | - | good |
| 33 | | Shilabo | Erguedben | | | 28 | | DS6 | 6 | | Gravel | | 2011 | | SPCWSSE | | - | good |
| 34 | | Adadle | Elbarde | | | 30 | | DS6 | 6 | | Gravel | | 2012 | | SRC E | | - | good |
| 35 | | Kersadula | Guradamole | | | 50 | | DS6 | 6 | | Gravel | | 2012 | | Own force | | - | good |
| 36 | | Sandahile | Garbo | | | 20 | | DS6 | 6 | | Gravel | | 2012 | | SRC E | | - | good |
| 37 | | Afdem | Danlahelay | | | 23 | | DS6 | 6 | | Gravel | | 2012 | | SRC E | | - | good |
| 38 | | beligubedle | Maslaha | | | 75 | | DS6 | 6 | | Gravel | | 2011 | | community | | - | good |
| 39 | | Foljeh | dhobaweyn | | | 20 | | DS6 | 6 | | Gravel | | 2012 | | Rabah G. C | | - | good |
| 40 | | Gorey | Melkaka | | | 17 | | DS6 | 6 | | Gravel | | 2011 | |  | | - | good |
| 41 | | Kubbi | Jarra | | | 16 | | DS6 | 6 | | Gravel | | 2011 | |  | | - | good |
| 42 | | Lafaise | Darwanaje | | | 30 | | DS6 | 6 | | Gravel | | 2007 | | Own force | | 2011 | good |
| 43 | | Dekasuftu | Dawa | | | 34 | | DS6 | 6 | | Gravel | | 2011 | |  | | - | good |
| 44 | | Hartsheik | Harshin | | | 20 | | DS6 | 6 | | Gravel | |  | |  | | - | good |
| 45 | | Derida | Geldoh | | | 13 | | DS6 | 6 | | Gravel | | 2012 | |  | | - | good |
| 46 | | Toneley | Madahmarodi | | | 19 | | DS6 | 6 | | Gravel | | 2009 | | Bawaqo G. Contractor | | - | good |
| **TOTAL (km)** | | | | | | **2018** | | | | | | | | | | | | |

**Maintenance Operations carried out in the past**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. no** | **Road Section** | **Location** | **Length (km)** | **Year** | **Source of Fund** |
| 1 | Godey—Bargele | Shabele Zone |  | 2001 | R. Fund |
| 2 | Harshin--Daror | Fafen Zone |  | 2001 | R. Fund |
| 3 | Jigjiga—Tulli guled | Fafen Zone | 30 | 2001 & 2006 | R. Fund |
| 4 | Kebribeyah-Hartasheik | Fafen Zone | 20 | 2006 | R. Fund |
| 5 | Godcusbo—Barey | Afder Zone | 70 | 2007 | R. Fund |
| 6 | Jigjiga—Jinaseni | Fafen Zone | 20 | 2008 | R. Fund |
| 7 | Tulli—Jare | Fafen Zone | 9 | 2008 | R. Fund |
| 8 | Barmil--Darida | Erer Zone | 25 | 2008 | R. Fund |
| 9 | Hargelle--Jarati | Afder Zone | 40 | 2009 | R. Fund |
| 10 | Hudet--Jilanqo | Dawa Zone | 50 | 2009 | R. Fund |
| 11 | Durre--Adigala | Ziti Zone | 60 | 2009 | R. Fund |
| 12 | Imey-Elkari | Afder Zone | 60 | 2010 | R. Fund |
| 13 | Imey-Raso | Afder Zone | 38 | 2010 | R. Fund |
| 14 | Godusbo-Barey | Afder Zone | 70 | 2011 | R. Fund |
| 15 | Jare-Dembel | Fafen Zone | 26 | 2011 | R. Fund |
| 16 | Durre--Adigala | Ziti Zone | 30 | 2011 | R. Fund |
| 17 | Fik-Sagag | Erer Zone | 45 | 2012 | R. Fund |
| 18 | Qarsadule-Sora | Liban Zone | 30 | 2012 | R. Fund |
| 19 | Aysha’a-Durdur | Siti Zone | 31 | 2012 | R. Fund |
| 29 | Ergudben-Higloley | Qorahay Zone | 31 | 2012 | R. Fund |

**Institutional Capacity problems**

There are difficulties in the staffing situation of the engineering Section more specially road maintenance Core process, and there are positions yet to fill.

* Where these difficulties in recruiting and in retaining competent staff originate from lack of budget.
* This missing staff has an impact on the performance of The Bureau.

The Bureau executes its road maintenance works by own force and the other problem is lack of enough machinery for maintenance works:

***The machinery we have includes:***

|  |  |  |
| --- | --- | --- |
| **S. No** | **Equipment type** | **Quantity** |
| 1 | Graders | 1 |
| 2 | Excavators | 2 |
| 3 | Rollers | 1 |

**The manpower**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No** | **manpower** | **Quantity** | **qualification** |
| 1 | Skilled manpower | 5 | Engineers |
| 2 | Supportive manpower | 2 | others |

**The Budget of managing the network**

Almost 100% our Budget for the maintenance of roads comes from Ethiopian Road Fund Office

**The federal democratic republic of Ethiopia**

**Office of the Road Fund Administration**

**Establishment**

Road Fund was established in **1997 E.C**. with the ‘***Establishment Proclamation No. 66/1 997.***" as a permanent financial resource to be deposited in a special account to be opened by the Ministry of Finance.

**Objectives of the Fund**

The objectives of the Fund shall be to finance the maintenance of roads and road safety measures.

*The existing representation of the board is as follows:*

* **Federal Government representatives:**

1. 1 Minister acting as a chairperson
2. 3 Vice Ministers acting as members
3. 2 General Managers acting as member and secretary

* **Regional Governments:**

1. 6 Regional government presidents acting as member (Includes the president of Addis Ababa)

* **Private Commercial Transport owners representatives acting as members:**

1. 2 from dry cargo transport owners
2. 1 from liquid cargo transport owner
3. 1 from passenger transport owner

**Sources of the Fund**

The Fund is collected from the following sources:

* budget allocated by the Government;
* road maintenance fuel levy;
* annual vehicle License renewal fee hazed on axle load;
* overloading fines
* Any other road tariff levied as may be necessary.

Proportional distribution of allocated fund is based on study recommendations of the maintenance action plan of the RSDP and as per to following endorsement by the board.

Currently the proportional allocation is in order of:

* ***70% for Federal,***
* ***20% for Regional and***
* ***10% for Municipal roads***.