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INTRODUCTION AND SCOPE

1.1 The Role of Roads in Rural Development

“It is not wealth that creates roads, but roads that create wealth”

..... John F Kennedy

The provision of Local Roads to serve rural communities of the former KwaZulu, which were neglected in the past, is a new initiative of the KwaZulu-Natal Department of Transport. This initiative will facilitate and provide opportunities for social and economic development of these areas. Within the constraints of the available budget, the creation of a holistic and integrated network of Local Roads which address the needs and aspirations of under-developed areas is seen as a fundamental need which will stimulate further economic development. By means of economic multipliers this programme will contribute to the generation of wealth in these communities.

While no proper records exist, it has been estimated that there are approximately 17 000 km of Local Roads - also known as Community Access Roads (CARs), which need to be improved to a basic earth road standard in order to satisfy the needs of these rural communities.

In other words the construction of new roads to give access to rural communities will create more opportunities for:

- agriculture and other economic activities
- better access to schools, health and other community services
- installation of electricity and telephones, and
- an enhancement of the social order which forms the fabric of modern society.

The planning process for a new road creates an opportunity for the community to participate in the identification of its need, priority and location, and further in its construction and future maintenance. At the construction stage labour may be employed from the community and opportunities for the local purchase of materials and appointment of emerging contractors may be created to support economic empowerment at a local level.

The KwaZulu-Natal initiative supports the vision statement of National Department of Transport, as set out in the Draft White

Paper on National Transport Policy of July 1996, to:

“Provide safe, reliable, affordable, efficient, and fully integrated transport infrastructure in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable”.

In order to progress towards this vision the broad goals of the National Transport Policy are to:

“Support the goals of the Reconstruction and Development Programme for meeting basic needs, growing the economy, developing human resources, and democratising decision making. The South African transportation system is inadequate to meet the basic accessibility needs (to work, health care , schools, shops) in many rural and urban areas. Small scale and subsistence farmers in many rural areas find it difficult to transport products and other commodities to and from markets. In accordance with the objectives of the RDP, these needs will be identified and addressed in an accelerated manner to the extent that resources permit”

1.1.1 CARCAM 2000 Programme

In 1995 the KwaZulu-Natal Minister of Transport guided his Department to establish a long-term programme of rural economic development through the provision of roads, known as CARCAM 2000 - Community Access Road Construction and Maintenance 2000. It is envisaged that a budget of R 1 billion will be allocated to the programme over a 10-year period. This ambitious programme of building roads for rural development to address the legacy of apartheid budgets is focussed on rural land in KwaZulu-Natal which is not in private ownership, and comprises very largely the former KwaZulu.

The CARCAM 2000 programme has the following objectives:

- a. To provide and maintain a balanced appropriate and effective road network aimed at economic development.
- b. To create employment opportunities.
- c. To create effective communication channels with stakeholders.
- d. To consult stakeholders in the prioritisation of road needs within the framework of a coherent road network.
- e. To develop the institutional capacity of Rural Road Transport Forums.
- f. To support emerging contractors and consultants.
- g. To maximise financial benefits and assets to communities.
- h. To create an awareness of career opportunities within the transport and construction industry for rural youth.

1.2 The Project Goal And Objectives

The goal of this project which is to initiate and support CARCAM 2000 is :

To initiate a programme for the promotion of economic and human development of rural communities by the provision of Local Roads, within the available budget.

In view of the complexity of the goal the **objectives** are broad and may be summarised under the following topics:

General Approach

1. To determine the optimum modus operandi for the study.
2. To identify the optimum manner of sub-dividing the Province into workable units of area based on the Dept of Transport's revised 26 Maintenance Districts or the 19 Magisterial Districts which cover the rural land not in private ownership, or a combination thereof.

Rural Road Transport Forums

3. To establish Rural Road Transport Forums in each Maintenance District which will determine priorities for the construction of new local roads and provide direct communication between community representatives and the Department of Transport.

Community Access Road (CAR) Database

4. By means of desk studies and field inspections in conjunction with community representatives to assess the lengths, populations, and facilities which would be served by the required local roads, and comprehensive lists prepared and stored in a suitable database, which would also contain such other information which is required for the identification of each road.

Mapping

5. To prepare small scale maps of each area indicating all CARs as identified by the communities.

Allocation of Funds

6. To investigate and recommend a method for the allocation of funds at the following levels:
 - a. at Provincial level for equitable distribution to each District, which shall include factors and criteria such as population, development potential, and accessibility.
 - b. at District level to prioritise the value and benefit of individual roads based on human and social development factors, and thus enable community representatives in conjunction with the Department of Transport to identify the most important roads for immediate construction, and to prepare budgets for subsequent financial years.

CAR Prioritisation

7. To investigate and recommend for each District / Area a list of all CARs ranked in order of priority as in 6b. above which will give the highest priority to those CARs which are required to serve large rural populations, schools and clinics / hospitals.

Statistical Summary

8. To provide a statistical summary list for each District / Area of the number and total length of all CARs which have been identified, the rural populations and facilities served, and the approximate cost of construction of the roads identified.

Design Standards for CARs

9. To recommend minimum design standards for the cross-section, design speed, horizontal and vertical alignment, and drainage of CARs, such that construction costs of the CAR programme can be optimised and controlled.

Maintenance of CARs

10. To investigate the suitability and costs of methods used for the maintenance of local roads in other developing countries for possible application to KwaZulu Natal, and to make recommendations thereon which will fulfill the economic and social issues as outlined in the project goal.

Reporting

11. To document the investigations in the form of a written report with attached drawings suitable for distribution and use by the various stakeholders - the Office of the Minister, the Department of Transport (Head Office and the Regional Engineers), the Transport Forums and other Provincial and National Departments. This should be supported by detailed information in computer database format.
12. It is essential that the method of reporting and presentation of information should form the basis of an ongoing function to monitor and update the information, and this shall particularly apply to maps which shall be suitable for use by the Transport Forums and to the database lists of CARs which can easily be updated.

1.3 Historical Framework of Local Roads in KwaZulu-Natal

Prior to April 1995 there were three National and Provincial road authorities responsible for rural roads serving the Province as indicated below:

	AUTHORITY	RESPONSIBLE FOR
1	National Department of Transport	National Roads
2	Natal Provincial Administration	The proclaimed network of Provincial Main and District Roads, including certain major links passing through areas administered by the KwaZulu Government
3	KwaZulu Department of Works	Main and District Roads serving rural communities in the traditional Tribal Areas

In addition the Department of Agriculture in the former

KwaZulu Government has built and maintained roads in KwaZulu for many years. They performed this function primarily to promote agricultural development by the construction of roads serving:

- ◆ cane growers
- ◆ timber lots
- ◆ community gardens and subsistence farmers
- ◆ dams, boreholes and cattle dips

Until recently these four Departments have operated fairly independently and a brief summary of the functions of each with regard to local roads are set out below:

1.3.1 National Department of Transport

No responsibility for local roads except those which are directly related to the National Road network.

1.3.2 Natal Provincial Administration - Roads Department

Local roads in the former **Province of Natal** have a different background and source of funding to those in KwaZulu, and a brief outline is included of each to illustrate the differences.

By-Roads

The maintenance of By-Roads in the former Province of Natal has been the responsibility of the local residents, and an annual subsidy has been paid by the Natal Roads Department to their authorised representative.

District Roads

District Roads were an innovation of the early post war period as a new class of roads intermediate between By-Roads and Provincial Main Roads, and were created in terms of Ordinance 14 of 1949. District Roads Committees, representing the local farming community, were created to recommend which farm-to-market roads carried the most traffic and deserved higher standards than were possible under the old By-Roads system.

At least three resident users were required for a By-Road and a District Road had to serve at least five resident users.

This proved to be a popular concept and 1340km were proclaimed within the first eighteen months, and records indicate the total length of District Roads increased considerably.

1.3.3 KwaZulu Government - Department of Works

The Department of Works was responsible for the construction and maintenance of a network comprising approximately

6 500km of Main and District roads which were not proclaimed and were mostly gravel surfaced. Local access to and from this system was gained by an extensive system of minor earth roads, forming the Tribal Road system which is thought to be of approximately 17 000km in extent. Responsibility for these roads was delegated to the respective Tribal Authorities in terms of Authority Affairs and Finance Circular No 5 of 1975. Tribal Authorities fell under the Department of the Chief Minister but no funds for road upgrading and maintenance were budgeted for.

Local Roads

Tertiary access roads in KwaZulu have been the responsibility of some 250 tribal authorities, and due to a lack of infrastructure these have largely been neglected and have deteriorated to such an extent that many are no longer usable. The Tribal Road Upgrading and Maintenance Programme (**TRUMP**) was initiated in the early 1990's by the KwaZulu Department of Works in conjunction with the Department of Traditional Affairs and Nature Conservation to attend to the needs of these roads.

A labour intensive approach was adopted due to the social and economic benefits of employment creation for local residents, as well as the difficulties of the logistical problems associated with using earthmoving plant in remote areas. In its fourth year of operation in 1993/4 some 340km of road were upgraded with a peak employment of 3 800 people, and sustained employment of 1 100 people. Basic standards were used with the road alignment following the natural ground line wherever possible.

Seventy-six Tribal Authorities received financial assistance of which 48 received an annual subsidy from the Department of Works. Total funds used amounted to some R9 million some of which was provided from the Strategic Oil Fund and from the Joint Services Boards.

1.3.4 Roads and Structures Upgrading Programme (RASUP)

An initiative of the KwaZulu Department of Works, RASUP was initially formulated in 1993 to obtain funding from the Development Bank of SA for the upgrading of the numbered ZM and ZD road network. The emphasis was on the employment of local labour and the training of local entrepreneurs in various priority development nodes in KwaZulu-Natal. The primary objective was improving mobility in these areas by providing all-weather access, for instance by the construction of causeways,

headwalls and small box culverts.

Several firms of consulting engineers who have been appointed for these projects have in addition managed the various construction processes involved including training and purchasing of materials with an emphasis on the use of local resources. Projects to the value of some R23 million were identified in Ulundi / Nongoma, Vulindlela, Jozini / Mbazwane, Ngwelezana / Esikhaweni, Gamalakhe / Turton and Ekuvukeni. Funds have been made available by the RDP and Department of Transport and several projects are still ongoing.

1.3.5 Amalgamation of the KwaZulu Department of Works and the Natal Roads Department

The formation of the new Provincial Government of KwaZulu-Natal led to the amalgamation of some 2 500 staff from the KwaZulu Department of Works and 5 100 staff from the Natal Roads Department, in order to create a single Department of Transport with responsibility for Provincial road and traffic matters. In addition 374 staff from the KwaZulu Department of Finance with responsibility for government motor transport and 22 from the KwaZulu Police Traffic Department were also included in the amalgamation. The lengths of roads which became the responsibility of the new Department of Transport are set out in Table 1.1 below.

	BLACKTOP	GRAVEL	TOTAL
NPA ROADS	5 800	9 260	15 060
KWAZULU ROADS	200	7 700	7 900
PONGOLA	70	200	270
TOTALS	6 070	17 160	23 230

The process was guided by the Transport Amalgamation Steering Committee comprising equal numbers of members from the two Departments representing employees and management which met over a period of 20 months to resolve the many issues involved. A set of ten basic principles formed the basis of the negotiations including those of equality and transparency.

1.3.6 Department of Agriculture

Agricultural roads are classified into primary, secondary and tertiary where the primary roads were often the main haul roads to the sugar mills, and the tertiary roads were the in-field roads. In 1992 many of the Department of Agriculture primary roads were incorporated as Main and District roads in the KwaZulu Department of Works road network. However the Department of Agriculture continues to maintain them when the condition deteriorates and adversely affects the hauliers.

Many years ago the Department of Agriculture established 'Roads and Bridges Committees' for each mill area, and these continue to meet on a regular basis to report road deficiencies, and to decide or recommend priorities.

The Department has always used its own personnel, plant and depots, but is presently considering transferring resources and functions to the Department of Transport.

1.3.7 Current Road Problems affecting the Sugar Cane Industry

Although not directly related to the historical structure of these authorities, it is perhaps important to record that as the result of heavy rains in the Province in January and February 1996 the cane industry faces serious cane haulage problems in the 1996/97 season due to the deterioration of haul roads in the Amatikulu, Felixton, Entumeni, Umfolozi and Maidstone areas. Some 450km of haul roads have recently been classified as being in 'very poor condition ie impassable when wet' (Status 'C'), which could affect the milling of some 400 000 tons of cane. A further 1 625km of haul road is classified as 'poor, requires urgent attention' (Status 'B') which could adversely influence the haulage of 1,5 million tons of cane should they deteriorate further.

Small growers in the Amatikulu area lost over R300 000 as a result of the inability to haul cane to the mill in 1995/96 due to inadequate roads, and in other areas losses amounted to approximately R4 million.

1.4 Scope of the Report

The **Scope** of the report as largely defined by the project goal and objectives as outlined in Section 1.2, is thus to set down the following aspects of the Community Access Roads programme in KwaZulu-Natal, as follows:

- the guiding principles of economic development of rural

communities through the provision of roads, and the methods of communication used;

- the modus operandi of the study, the methods of data collection used, and the prioritisation methodology which has been developed for the optimum application of available funds;
- the findings and recommendations of the study team on the design of community access roads for the often demanding terrain and soil conditions of KwaZulu-Natal, and on maintenance strategies for the completed roads;
- finally, to recommend strategies for the implementation of the programme, including aspects such as funding, administration, training and the implementation programme, and to advise on the way ahead.