### Implementation



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#### Implementation

#### Introduction

The Chief Directorate: Implementation's core functions are: -

- Provision of a balanced, equitable provincial road network
- Road traffic law enforcement
- Road traffic safety
- Good governance

Services to the public are provided and co-ordinated by the Regional Director offices in Empangeni, Ladysmith, Pietermaritzburg and Durban and the Regional Directors manage of the various departmental offices within the regions. These offices are responsible for the effective delivery of programmes and projects.

### **General Review: Roads**

#### **Extension of the Provincial Road Network**

Dry weather conditions during the 2002-2003 financial year resulted in good progress being achieved with road projects. During the financial year, the regions constructed a further 519 Km of new Local Roads at a cost of R61 million. This means that the department now has more than 3 000 Km of Local Roads (previously termed community access roads) serving communities and facilities in rural areas as part of its Provincial Roads network. These roads are mostly maintained using the Zibambele system.

77 new causeways and 6 pedestrian bridges were completed a cost of R18,1 million to address the urgent need for safer river and stream crossings in rural areas. In addition, 12 new bridges were built by the regions and on the African Renaissance Road Upgrading Programme projects.

#### **Road Network Assessment**

The KwaZulu-Natal Provincial Roads Act (Act 4 of 2001) requires the department to review and declare a new provincial road network by end June 2003. Good progress was made towards the attainment of this target and during the 2002/2003 financial year road assessments were undertaken on a high proportion of the road network. This assessment is being used to determine the status of all roads within the provincial road network and the completion of this process will be a major advancement in moving towards a balanced, equitable Provincial Road network.



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#### **Road Outputs**

Progress with road construction and maintanance projects is very dependent on weather conditions. The 2002-2003 financial year was a relatively dry year, resulting in actual outputs achieved on several of the activities being higher than the original targets recorded in the department's strategic plan. A perusal of table1 shows that the outputs for 2002-2003 financial year exceeded the targets set in the departments strategic plan for nearly all activities. These outputs were also higher than those of the previous year.

With the road rehabilitation projects undertaken, an increased amount of light rehabilitation work was done at the expense of the programmed heavy rehabilitation work. In spite of the drier weather, the amount of blacktop patching done was higher than the strategic plan target and this is as a consequence of the general poor condition of blacktop roads resulting from a shortage of funding for rehabilitation work.

With the construction of new bridges, the regions were able to complete 5 bridges in place of the target of 3 in the strategic plan and this is attributable to the dry weather that enable these projects to be completed earlier than anticipated. Atotal of 7 bridges were constructed on the African Renaissance Road Upgrading Programme projects. Although these had not been recorded under the origional strategic plan targets, it has been decided that they should be recorded here to provide a complete record of outputs.

The high outputs for the remaining activities in relation to the strategic plan targets is directly attributable to the relatively dry weather conditions that facilitated good production rates.

In spite of the achievements, considerably more work is required to restore the road network to an acceptable condition and current funding levels are still far short of what is necessary for the road infrastructure.

ACTIVITIES	UNITS	EMP	LSM	РМВ	DBN	ARRUP	2002/3 TOTAL	2002/3 STRAT PLAN TARGET
Construct Surfaced roads	Km	2,5	4,9	0	3,0	25,7	36,1	36.0
Light Rehabilitation	m²	4,800	220,000	26,950	13,317	0	265,067	163,320
Heavy Rehabilitation	m²	73,000	0	100,000	111,771	0	284,771	321,136
Reseal tarred roads	m²	350,820	0	251,000	25,000	0	626,820	577,900
Blacktop patching	m²	19,080	26,616	23,032	13,027	0	81, 755	68,000
Construction of Local roads	Km	207	155	77	80	0	519	410
Blade Roads	Km	25,518	11,403	9,978	15,502	0	62,401	44,220
Regravelling	Km	235	106	319	69	0	614	498
Construct Causeways	Number	35	16	9	17	0	77	68
Construct Bridges	Number	0	1	3	1	7	12	3

#### Table 1: Provincial Road Network- Summary Of Achievements





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ACTIVITIES	UNITS	EMP	LSM	РМВ	DBN	ARRUP	2002/3 TOTAL	2003/3 STRAT PLAN TARGET
Employment opportunities created	Person days	35,320	32,500	8,180	13,770	25,230	115,000	110,000
Zibambele maintenance programme	No. of contractors	6,082	3,770	2,249	2,724	0	14,825	14,800

Table 2: Socioeconomic Outputs

#### **Emerging Contractors**

As part of the Vukuzakhe emerging contractor development programme, emerging contractors were used over the full spectrum of road construction and maintenance activities undertaken by the regions. There is a general shortage of contractors for road work in South Africa and the Vukuzakhe programme is making an impact through the development of new contractors that are becoming experienced and skilled as road contractors. The numbers of emerging contractors utilised are shown in table 3 and as can be seen, the numbers of emerging contractors utilised has exceeded the targets in the strategic plan:

CONTRACT LEVEL	ЕМР	LSM	РМВ	DBN	ARRUP	2003/3 TOTAL	2003/3 STRAT PLAN TARGET
Stage 1	252	193	44	77	28	594	480
Stage 2	40	53	42	18	9	162	144
Stage 3	19	28	18	11	9	85	78
Stage 4	2	3	1	1	14	21	15

Table 3: Emerging Contractor Opportunities – Number of contracts by stage

### **Road Traffic Law Enforcement**

In spite of serious shortages of traffic officers, the Road Traffic Inspectorate stations in the regions managed to exceed their strategic plan targets for 50% of the listed activities (see table 4). As a result of the staff shortages and additional effort being put into other key activities, their outputs were below the strategic plan targets under 3 activities. The number of traffic officers in the regions reduced during the year as a result of the formation of other specialist units within the department and the resulting vacancies are to be filled early in the new financial year. During vehicle weighing exercises, checks were carried out on vehicle licenses, resulting in the collection of R 666 154-88 for unpaid license fees.

Remediation work was carried out at a number of hazardous locations to improve the safety of the road network and outputs were considerably higher than the strategic plan targets. This was due to improved co-ordination of efforts and a greater awareness by Regional personnel on the benefit and importance of these projects.

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ACTIVITIES	UNITS	ЕМР	LSM	РМВ	DBN	2002/3 TOTAL	2002/3 STRAT PLAN TARGET
Minor hazardous Location improvements	Number	10	1	6	15	32	9
Major hazardous Location improvements	Number	2	0	6	1	9	1
Roadside Checks	Number	7,042	120,609	113,197	182,436	463,284	500,000
Govt vehicle inspections	Number	450	1,850	1,204	3,940	7,444	8,000
Breath tests RBT	Number	33,277	91,030	14,837	147,849	286,993	300,000
Speed timing	Number	6,929	675,406	2,796,862	2,727,204	6,536,401	5,000,000
Vehicles weighed	Number	8,135	770	36,308	53,865	184,078	180,000
Visible policing	Km patrolled	724,011	660,000	784,670	1,884,556	4,053,237	2,600,000

#### Table 4: Road Traffic Outputs

#### **Good Governance**

In line with the concept of "one- stop -shop" regional offices, futher adjustments were made to the regional infrastrutures. As an example, resources that previously constituted the departmental construction units were intergrated with the regional maitanance forces to concentrate on much needed road regravelling and rehabilitation work.

Greater co-ordination of the activities of the maintanance forces and the road traffic inspectorate staff has been achieved through improved communication and reporting processes and this is resulting in improved response times and safer roads.

The mission directed work teams approach that was piloted in the Pietermaritzburg Region, has now been extended and implemented in all four regions. This has had a marked effect on productivity improvement and has developed a culture of teamwork, participation and continuous development of the staff.



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# **Examples Of Projects**

#### District Road D820: Muzi Pan – Kwajobe – Empangeni Region

The D820 is situated in the Jobe Tribal Authority under the uBombo RRTF in northern KwaZulu Natal. It is 22,7km long and links the town of Jozini to the surrounding towns such as Mnqobokazi, Mduku, Makhasa and also Mbazwana in the east. The road provides a vital access link to local schools, clinics, a community center, tribal court, and agricultural land. It also provides an access route for more than 1500 households, and helps to encourage the development of the tourism potential of the area.



Before construction the road was very slippery when wet, and large potholes had formed in some sections. This made

D 820 Linking Jozini to several towns on route to Mbazwana

the road uncomfortable and unsafe to use in dry conditions, and impassable to most vehicles in wet conditions resulting in extended travel times, and increased road user costs. Road improvements included drainage improvements, gravel patching and the construction of a black top surface over a 3,1km portion of the road. The result is a road that can be used by vehicles, including buses and heavy vehicles, in most weather conditions.

The project created job opportunity for the community because emerging contractors were used for the construction work. Lake Sibayi community services were used to off-load and spread the road lime. Biyela Construction constructed the gabion protection works, and where possible, construction plant used on the project was hired from local plant hire companies.



Labour intensive work in progress on the KwaGuqa Access Road

### The KwaGuqa Access Road – Empangeni Region

His Majesty The King, put his wishes for the development of a historical site on KwaCeza mountain to the Minister of Transport. The mountain has an unusual rock formation where massive blocks have dislodged and formed caverns where King Dinizulu once took refuge. The historical significance is that British soldiers are reported to have attacked Dinizulu at this site and it is where King Dinizulu is known to have first called together his subjects for prayer.

This development has the potential of being a tourist attraction, but the site was inaccessible by vehicle.

A 5m wide gravel road was constructed over a distance of 2,9 km through mountainous terrain. The community-based project was driven by the Hlengumuzi Development Committee and 180 local people were employed during the construction phase. An amount of R715 236-00 was paid directly to the community of Ceza. The construction of the access road was completed in December 2002 at a total cost of R 1,8 million.



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#### Mfithi Access Road - Empangeni Region



The new Mfithi Access road

The Mfithi access road is situated in the Nyawo Tribal Authority under the Ingwavuma RRTF in northern KwaZulu Natal close to the Swaziland border. This is a new access road that is about 10,5km long that provides an access to more than 600 households, and the local school. Prior to construction there was no vehicular access to the community, only a footpath. The local community had to walk long distances over steep terrain to and from the schools, and to fetch water. Any household supplies had to be carried long distances to the houses.

An amount of R1, 23 million was spent on building an earth road in rocky, mountainous terrain that that can be used by smaller vehicles, providing improved access for the local communities. Households can now transport supplies and other heavy loads closer to their homes.

#### Nhlesi Road: Ladysmith Region

The Nhlesi Valley in the Msinga area is surrounded by steep hills and the only means of access for the community and a large school in the valley is by foot. Departmental forces made good progress with the construction of a 10 Km road through mountainous terrain. This road will be completed during the 2003-2004 financial road.



Nhlesi Road under construction in mountanious terrain

### Umsunduzi River Bridge: Goedverwatching – Mboyi (D1000): Pietermaritzburg Region

This bridge was constructed at a cost of R3.3m and was constructed to a high level of end finish and within the estimated time. The Umsunduzi River is known for its flash floods, particularly during the summer months and as a result a low level structure would not have been able to satisfy the need for people to cross at all times.



The new Umsunduzi River Bridge



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### Umsunduzi Footbridge At Khobongwaneni (Vulindlela Area): Pietermaritzburg Region

A steel foot bridge was completed during the year to create access across the river for children to attend school and for the commercial needs of the community.



Foot Bridge over Umsunduzi River

### Fafaza Road (Vulindlela Area): Pietermaritzburg Region

This 1.4 km length of road was critically in need of upgrading due to its very poor condition and the extensive use made of it by the residents in the area. The road traverses a very steep section and as a result the steepest section of the road was concreted to avoid scouring and alleviate skidding by vehicles using the road. As can be seen in the attached photo extensive stone pitching had to be done to protect the concrete section from being damaged by excessive rain.



Fafaza Road prior to upgrading



Stone pitching of side drains on the Fafaza Road

#### Mashingeni Staircase: Pietermaritzburg Region



Mashingeni Staircase providing all weather access in the very steep terrain

Due to the very steep nature of the terrain at Mashingeni the footpath which was used by the people in the area became dangerous due to scouring and the slippery surface during periods of rain. The only affordable practical solution was to construct a stairway with lightly reinforced concrete to create an all weather footpath as access. The work was all done by hand including the mixing and transporting of concrete to the site.



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### **Mpisi River Bridge: Durban Region**

#### New infrastructure funding

The Mpisi River Bridge was built over the Western channel of the Mpisi River on District Road 881 near Maphumulo to replace a low level causeway that was washed away in 2001. There are 5 spans, each 6,5 m long and local skilled and unskilled labour was used in the construction. This project was completed at a cost of R1,3 million and will greatly improve the mobility of the surrounding community in this well populated area.



Low level causeway washed away by heavy floods, January 2001



Mpisi River Bridge in October 2002.



Almost complete new bridge in November 2002, tail end of earthworks remaining.

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#### Rehabilitation On MR82 Pinetown - Queensburgh: Durban Region (Conditional grant funding)

The MR82 is a very heavily loaded section of road carrying more than 30 000 vehicles daily in each direction, many of them heavies between the harbour and the hinterland. The road was built more than 20 years ago, and has reached its design life span. It has heavy rutting, distortion of the surface and severe cracking. Rehabilitation of this road is taking place over several years and phase 2 was undertaken during 2002-2003. Four Kilometres of dual carriageway freeway were rehabilitated at a cost of R9,6 million.

The work done included removing the asphalt layers to various depths and then replacing it with a continuously reinforced concrete layer in the slow lane and an asphalt surface (Stone Mastic Asphalt) in the other lanes.



MR82 – August 2002: Serious rutting that is a major roadsafety hazard, especially in wet weather conditions



Continuously reinforced concrete layer being layed to a depth of concrete of 240mm to provide for a 30 year service life.

#### Rehabilitation On Main Road 395: Durban Region Conditional grant funding

This project was to rehabilitate the badly distressed sections of the busy main road between Margate and Port Shepstone. Many patches had been done to long sections of road, indicating deeper lying problems. A depth of 40mm was milled out and then replaced with a new asphalt layer. A length of approx. 1,7km, in both directions, was rehabilitated at a cost of R 1 million.



Roller and paver in action on site, after milling operation. October 2002



Road being swept after milling. October 2002



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#### **Rehabilitation** Of Mzimayi River Bridge: Durban Region (Conditional grant funding)

The Mzimayi River Bridge is on Main Road 3 just North of Hibberdene and crosses the estuary of the Mzimayi river. This bridge is in close proximity to the mouth of the river and the salty air had resulted in extensive corrosion of the steel and spalling of the concrete under the deck. Concrete reconstruction was done on the beams and all the bridge bearings were refurbished or replaced. A protective coating was then applied. The total cost of the work was R1,9 million.



Side view of the Mzimayi River bridge on MR 3 Port Shepstone.



Workmen busy with construction on the underside of the deck



Underside of rehabilitated deck.



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# Upgrading Of Road Traffic Inspectorate Driver Testing Facility: Durban Region

This project is for the upgrading of the driver's testing facility and relocation of the weigh bridge. The first phase of the project started in August 2002 when the existing drivers plateau and approach road was strengthened to accommodate the overloaded vehicles that would be impounded in this area. The additional parking area and a new K53 drivers test area followed.

Approx. a R1 million was spent on the facility in the last 9 months. It is anticipated that R500 000,00 may still be contributed by the Department of Transport, National Department of Transport and the Department of Public Works for more work.



Additional public parking area and new K53 test area at RTI Pinetown



Vehicle impounding area strengthened to accommodate overloaded vehicles.

### License Conversions: All Regions

Much of the all important process of converting the driver's license from the I.D. document into a card type driver's license took place during 2002-2003. Office hours were extended at the major centres to cater for the last minute rush.



Queues, signing in and having eye tests, finger prints, etc. at Rossburgh

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