

**Part 2**

## R E P O R T   O F   T H E   H E A D   O F   T R A N S P O R T

## SECTION 3: PROGRAMME 2: ROAD INFRASTRUCTURE

### Sub-programme 2.1 Programme Support Office

#### Public Private Partnership (PPP) for Sourcing Engineering Plant

Consequent to difficulties experienced by Vukuzakhe Contractors when hiring engineering plant, the Department identified a need to establish a Public Private Partnership for the hiring of engineering plants by Vukuzakhe Contractors at reasonable rates. To mention one problem, the exorbitant plant hire rates charged to Vukuzakhe Contractors increased the cost of road construction. As a result, strategies to address the situation and provide support to the emergence of Broad Based Black Economic Empowerment (BBBEE) Construction Companies who do not have ready access to engineering plants, were developed.

A feasibility study of a PPP was conducted and a document submitted to Provincial Treasury for approval. The second phase will be the roll out during the 2005/06 financial year, once approval has been obtained.

#### Technology Transfer Centre

The Department's Technology Training centre was actively involved during the 2004/05 financial year in re-alignment of the organisational structure in response to changes in customer training needs. The centre also relocated from the Pietermaritzburg Region to new offices at Head Office.

The renovations at the Technology Transfer Centre which were undertaken during the 2004/05 financial year created a conducive environment that provides standard facilities including :-

- a modern materials testing laboratory;
- a mechanical workshop for training mechanical apprentices;
- four (4) modern equipped training rooms;
- a refurbished theatre;
- two (2) computer training rooms equipped with approximately 30 desk tops;
- a documentation centre; and
- a modern boardroom.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

The centre now has adequate facilities to conduct training sessions and workshops for the Department.



*Reception area of the Centre*



*Computer Training room of the Centre*



*The Centre's Laboratory*

#### Technical Training

The Centre approached the relevant authorities with a request to obtain South African Qualification Authority (SAQA) accreditation. Although, there had been delays in the process, significant progress has been made towards the accreditation of facilitators and compilation of essential documentation.



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

The following tables indicate a summary of the courses that were conducted during the 2004/05 financial year and statistics of trainees who attended the courses.

<b>Table: Driver and Operator Training</b>		
<b>Course Name</b>	<b>Internal/External</b>	<b>No. of Trainees</b>
Brush Cutter and Chainsaw	Internal	45
Certificate of Competency	Internal	148
Driver Refresher Training	Internal	77
Dangerous Goods	Internal	51
Driver Training Code 10	Internal	37
Driver Training Code 8	Internal	37
Emergency Stop & Steering System	Internal	32
Truck Mounted Crane	Internal	6
Forklift Refresher Training	Internal	27
Forklift Training	Internal	10
Grader Training	Internal	118
Operator Training	Internal	26
<b>TOTAL NUMBER TRAINED</b>		<b>614</b>

<b>Table: Miscellaneous Courses</b>		
<b>Course Name</b>	<b>Internal/External</b>	<b>No. of Trainees</b>
Accident Report Workshop	Internal	25
Anti-hijacking Course	External	20
Facilitator Training	External	32
First Aid Level 1	External	32
Fire Fighting	Internal	15
Health & Safety Rep Training	External	28
Interpretation of Engineering Drawings	Internal	11
Introduction to SADC Guidelines for Low Volume Sealed Roads	External	38
Safety Training	Internal	26
M.D.W.T. Training	Internal	18
Radiation Course	External	6
Road Signs Manufacture Standards	External	151
The Role of Unit Standards in Skills Development	Internal	62
SAMTRAC	External	2
SHE	External	1
SHEPP	External	1
Transportation Services and Infrastructure	External	1
<b>TOTAL NUMBER TRAINED</b>		<b>469</b>

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

<b>Table: Mechanical Training</b>		
<b>Course Name</b>	<b>Internal/External</b>	<b>No. of Trainees</b>
Basic Arc Welding	External	12
Bell Maintenance	External	6
Bell Grader Training	External	5
Oxygen Acetylene Welding	External	19
Toyota Maintenance	External	7
Volvo Grader Training	External	9
Wear Check Level 3	External	12
<b>TOTAL NUMBER TRAINED</b>		<b>70</b>

<b>Table: Construction &amp; Maintenance Training</b>		
<b>Course Name</b>	<b>Internal/External</b>	<b>No. of Trainees</b>
Betterment Training	Internal	21
Bituminous Products in Practice: Introductory Course	External	39
Blacktop Patching	Internal	28
Blading	Internal	6
Concrete Durability Course	External	3
Construction and Application of Hot Mix Asphalt	External	22
Construction and Application of Surfacing Seals	External	19
Design of Surfacing Seals	External	17
Gravel Processing	Internal	9
Labour Intensive Road Construction	External	20
Pavement Design	External	4
Pipe Installation	Internal	4
<b>TOTAL NUMBER TRAINED</b>		<b>192</b>

<b>Table: Management Training</b>		
<b>Course Name</b>	<b>Internal/External</b>	<b>No. of Trainees</b>
Contract Management Course	Internal	55
Effective Management & Leadership	External	21
Fleet Management Workshop	External	1
Presentation Skills Workshop	Internal	55
Project Management	External	7
<b>TOTAL NUMBER TRAINED</b>		<b>139</b>



Part 2

**Part 2**

## R E P O R T   O F   T H E   H E A D   O F   T R A N S P O R T

**PROGRAMME 2: ROAD INFRASTRUCTURE****Sub-Programme 2.2: Planning****Research & Liaison**

The Department's active participation in Technology Research and Liaison was marked by its involvement in the following committees:

- Technical Committee for Conference for Asphalt Paving in South Africa (CAPSA) 2004.
- The negotiation and signing of a memorandum of understanding with the Asphalt Academy for collaboration in conducting of asphalt related courses.
- Accelerated Pavement Testing Steering Committee.
- Asphalt Academy Advisory Board.
- Centre for Industrial and Scientific Research (CSIR) Research Advisory Committee.
- Materials and Pavement Management Sub-committees of Committee of Transport Officials (COTO).

The Department was also nominated to host the 2<sup>nd</sup> Africa T<sup>2</sup> Conference that will be held in September 2005.

A project planning manual to assist cost centre and regional managers in project planning has also been compiled.

**Laboratory & Field Testing**

There was no testing of materials that were conducted during the financial year under review due to renovations of the Centre. However, the following crucial activities were conducted:

- Bitumen Tanker Calibration Bay was completed for use by the Asphalt Industry. The Department will, during the next financial year, provide a calibrating service to asphalt contractors at a nominal fee to ensure that spray tankers meet the required standards.
- New Linear Displacement Integrator (LDI) equipment and necessary software was also purchased.
- An automatic Dynamic Cone Penetrometre (DCP) apparatus which is an equipment to measure stiffness of pavement layers for re-habilitation design has also been purchased (it should be noted that this equipment is the first to be delivered in the country).
- The Geotechnical Laboratory has been fully equipped to carry out geotechnical tests that could previously be carried out only at universities.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

##### Infrastructure Management Systems

The following initiatives have been undertaken by the Department:

- Modification and adaptation of DTIMS (software programme that undertakes deterioration analysis over the life cycle of a road for comparison and prioritisation) Pavement Management System.
- Modification and adaptation of DTIMS Gravel Road Management System.
- Visual inspection of 16 000 kilometres of gravel road and first production of unpaved roads maintenance needs and consequence Analysis Report.
- First production of paved roads maintenance needs and consequence Analysis Report in DTIMS.
- Traffic Counting Strategy Document have been compiled.
- Emerging contractors/businesses have been appointed to carry out manual traffic counts and expansion of traffic classification categories to include taxis and buses.
- Specification for the quarry database for users have been completed and SITA have been appointed to develop the system.
- Inspection reports on bridges have been issued.

##### Sub-Programme 2.3: Design

The planning process for upgrading of existing roads or construction of new facilities involves participation by local stakeholders. Accordingly, Rural Road Transport Forums assist the Department in prioritising proposed projects.

Likewise, input standards and safety requirements of new projects and road upgrading projects are sourced from the Community Road Safety Councils.



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

##### Sub-Programme 2.4: Construction

##### New Infrastructure

##### Blacktop Roads

A total of 73 kilometres of new blacktop road was completed during the 2004/05 financial year under various construction programmes. These projects were in essence an improvement and upgrading of existing gravel roads to blacktop standard. The process was also partly an improvement of road alignment and upgrading of river crossing structures.



*Road P26: Before Construction*



*Road P26: After Construction*

##### New Gravel Roads

Local Roads: During the 2004/05 financial year, a total of 430 kilometres of local roads were constructed. This brings the total length of local roads in rural areas, to date, to in excess of 3900 kilometres.

Sivulindlela Local Road, which provides access to facilities such as pension payout points, tribal court, community hall, clinic, two (2) primary schools and a high school, is one of the access roads that were constructed during 2004/05 financial year.



*Section of Sivulindlela Local Road*

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

Pictured below is Road A1594 which was also constructed by a Stage 2 Vukuzakhe Contractor, and local labour used was 48 person days. This road services community access to KwaXulu Primary School and a pension pay point.



*Road A1594*

Another new local road constructed during the 2004/05 financial year is Madonela Road. This road is located under the Umhlabuyalingana RRTF and Local Municipality. It also forms a major link between Manaba communities, Manaba Clinic, Madonela Clinic, Manaba Tribal Court, three local schools, pension paypoint and small business sites to R22 Spatial Development Initiatives. The road links Mbazwana, Hluhluwe and the N2.

The contract was awarded to a 100% black -manufacturing company which hired local labour.



*Madonela Road*



Part 2



## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

Nyokeni Road under Hlabisa RRTF in the BIG 5 local municipality, which forms a major link between Mngobokazi communities, schools, pension paypoint and small business sites, was also constructed.



*Nyokeni Road*

#### Labour Based and Labour Intensive Programmes

This programme was initiated as a response to an urgent need to create job opportunities and address shortage of skills in the province. The programme promotes the utilisation of labour intensive methods of construction to maximize job opportunities.

This programme is in line with Government's Expanded Public Works Programme, which seeks to alleviate poverty and increase job opportunities by providing unemployed people the opportunity to earn an income, gain work experience and provide on the job training and skills development.

It is a well known fact that unemployment and poverty is prevalent amongst rural women and youth. Therefore, Municipalities with poverty levels between 60 and 80% were targeted for the fourteen (14) labour intensive projects listed in the following table. Construction of approximately 77 kilometres of gravel roads was undertaken in 2004/05 financial year. To date, 53,4 kilometres has been completed, with the remainder of the work scheduled to finish in 2005/06 financial year.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

The following table reflects the lists of projects and the pictures demonstrate some examples of active participation of communities in the project:

**Table: Labour Based Projects**

Project	Area	RRTF	Road Length	Allocated Budget
Nhlabamkhosi/Ngwebini Roads	Babanango	Mahlabathini	6.5	R 1 950 000
Mkhonjeni Road	Jozini	Jozini	5	R 1 250 000
Nthuthuko Road	Inanda	Durban Metro	3.8	R 1 900 000
Chibini/A3811 Roads	Ndwedwe	Ndwedwe	6.75	R 2 000 000
Mnxangala Road	Nquthu	Nquthu	9.5	R 1 375 000
Nsimbini Road	Msinga	Msinga	4.9	R 1 625 000
Mnamatha Road	Maphumulo	Maphumulo	6.9	R 1 690 000
Road A1529	Nkandla	Nkandla	10.5	R 325 000
Road L170	Ezingolweni	Ezingolweni	1.6	R 775 000
Thwabala Road	Okhahlamba	Bergville	2.8	R 1 250 000
Road D168	St Faiths	Umzumbe	5	R 1 972 000
Manhlanhla	Nongoma	Nongoma	5*	R 540 000
Trustfeeds/Isibonelo Roads	Swayimane	Umshwati	4*	R 420 000
Inkonjeni Road	Empangeni	Ongoye	5	R 590 000



*Community workers preparing a drain for headwall at Mkhonjeni Road (Jozini RRTF)*



# Part 2

## REPORT OF THE HEAD OF TRANSPORT

### PROGRAMME 2: ROAD INFRASTRUCTURE



*Community workers digging a trench for causeway at Mnxangala Road (Nquthu RRTF)*



*Community workers opening up side drains at Mkonjeni Road (Jozini RRTF)*

The picture below is Thwabala Road, which has been constructed by means of labour intensive construction methods. The project commenced in October 2004 and will be completed in the 2005/06 financial year. Currently, one hundred and fifty three (153) people are employed in this project of which 61% are youth. Training is also provided to participants.



*Thwabala Road during construction*



*Completed portion of Thwabala Road*

Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

Community participation was the basis of the programme. Each project consisted of a Steering Committee, made up of representatives from the RRTF, Traditional Authority, Public Transport, Local Government, women and youth sectors. The Steering Committees dealt with recruitment of labour, ensured consultation with communities, as well as transparency and fairness of the process.

Labour was recruited in line with poverty-alleviation considerations, where preference was given to households with no source of income. Youth and women with some leadership potential, were specifically targeted for supervisory positions.

A total of 3 053 job opportunities were created in local communities, of which 53% were women, and 62% youth.

As part of Youth Empowerment, forty two (42) S3 civil engineering students were employed as project managers on sites. They were contracted for twelve (12) months as part of their experiential training required by technikons to qualify academically.

In support of training and skills development, the workers were trained on technical and life skills. Technical training was offered by CETA through an accredited trainer, which focused on construction activities such as laying of pipes, headwalls construction, brick making, first aid and safety. Training on life skills which was funded by the Department of Labour, focused on HIV/AIDS and basic business skills.

#### Bridges and Causeways

Bridges: Eleven (11) new bridges with a span greater than 2 metres were constructed during the year instead of the targeted 6 units.



*D1000 Bridge: During Construction*



*D1000 Bridge: Complete*



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

The construction of the Umsunduzi River Bridge No.3111 on Road A5265 commenced on 30<sup>th</sup> June 2004. The bridge consists of 4 spans, 65 metres long and 6.625 metres high, continuous with pre-cast reinforced concrete beams, single lane with foot walk. As at 31<sup>st</sup> March 2004, 80% of the work was complete.



*Umsunduzi River Bridge During Construction*

Causeways: A total of fifty seven (57) out of the fifty eight (58) causeways earmarked for the year were completed, with the balance still in progress, due to delays as a result of the rainy summer weather conditions.



*Doornkop Causeway During Construction*

A causeway in Utrecht that was collapsing and dangerous to scholars and teachers was identified as first (1<sup>st</sup>) priority by the Utrecht Rural Road Transport Forum. The causeway was completed during the 2004/05 financial year by a stage 1b contractor.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



*Pitout Causeway DC25 in Utrecht during Construction*

Another contract in Umshwati, illustrated by the following pictures, was awarded to another stage 1(b) contractor.



*Gojini Stream Crossing*



*Gojini Stream Crossing*



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



*Siphandule Causeway in Pongola during construction*

Another causeway situated at Siqabazini along P522/2 under the uMhlabuyalinga RRTF was constructed. The structure is serving the community of Mnywanini and Siqabazini to access community services such as schools, a clinic and a vegetable market.



*Mnywanini Causeway*

**Pedestrian Bridges:** Two (2) pedestrian bridges were constructed to provide an all weather crossing to the communities it serves.

#### **Black Mfolozi Suspension Pedestrian Bridge**

During December 2003 the KwaZulu-Natal Department of Transport undertook to provide an all weather crossing over the Black Mfolozi River.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

Accordingly, a continuous, three span, suspension bridge consisting of steel frame supporting a plate walkway was designed. Owing to the specialised nature of a suspension bridge, the contract was awarded to an established contractor and construction commenced during February 2004.

However, wherever practically possible, local labour was recruited with the assistance of the Local Rural Road Transport Forum. Approximately, eight hundred and twenty five (825) person-days of local labour were utilised.

The project was completed during April 2004. The final structure is now a landmark in the area. Previously the community was isolated.



*Black Mfolozi Pedestrian Bridge*

#### Eshowe Pedestrian Bridge

Another pedestrian bridge was completed during August 2004 across Main Road P47/4 in Eshowe. The bridge serves as an access walkway for communities to the town of Eshowe.

The contract was awarded to a stage 3 contractor, who recruited local labour. This bridge provides a safe crossing for school children and has become an eye-catching landmark in the area.



*Eshowe Pedestrian Bridge*



Part 2



## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

##### Road Upgrading

Good progress was made with the provision of agricultural link roads in rural areas serving nodes of agricultural activity and potential agricultural nodes.

During the 2004/05 financial year, twenty (20) kilometres of roads were surfaced and a total of sixty-two (62) kilometres of tracks were upgraded to well engineered gravel road standard.

This programme ensures access is provided for agricultural purposes and to local people.

Below are pictures of Road D1820 which is an agricultural road project in the Nongoma area. The road also serves the Nyokeni Royal Palace.



*Road D1820: Before Construction*



*Road D1820: After Construction*

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

Main Road P236 from Mkhuze Town through the beautiful mountains of Ubombo, linking Ubombo Town and Bethesda Hospital to Jozini Dam and agricultural land in Makhathini flats, was upgraded in the 2004/05 financial year. Nine (9) kilometres of the road have been upgraded from gravel to blacktop from Mkhuze to Ubombo Town during the past financial year.



*Portion of upgraded P 236*

#### African Renaissance Roads Upgrading Programme

The African Renaissance Roads Upgrading Programme (ARRUP) currently comprises the upgrading of eight major rural road transport corridors and one urban transport corridor. Collectively, the ARRUP projects provide strong evidence to support the view that the KwaZulu-Natal Department of Transport is making significant progress towards bridging the gap between our first and second economies.

An efficient and effective transport system is considered a necessary condition for economic growth and development. It is common cause that a major legacy of the apartheid and separate development era is that our democratic Government inherited a situation in which the majority of rural communities, as well as some urban and peri-urban communities, did not have adequate access to transport facilities. Their physical isolation also resulted in their social and economic isolation from the rest of South Africa. It is this isolation that has led President Thabo Mbeki to coin the concept of a "second" economy.

The budgets allocated in support of ARRUP are large and, in all likelihood, represent the largest capital expenditure to stimulate rural economic and social development made by any Provincial Government in South Africa. Certainly, the magnitude of investments made into ARRUP projects, which traverse communities with deep rooted poverty, undoubtedly are the largest capital investment made by Government within beneficiary communities.

As such, all ARRUP projects are expected to result in the integration of complex changes both to the construction industry of KwaZulu-Natal and to the lives of beneficiary communities. ARRUP is expected to renew beneficiary communities in that a minimum target of 70% of total budget allocations is directed towards broad based black economic empowerment, including the support of local suppliers, entrepreneurs and work seekers. ARRUP is also expected to kick start stagnant rural economies by dramatically reducing local transport overheads and accessing communities to a new dispensation in investments concerning the agricultural, tourism and transport sectors.



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

It is pleasing to report that all ARRUP projects are on line to achieve a 70% budget allocation towards securing broad based black economic empowerment. Indeed, some projects have achieved 100%. Thus, for example, the Ndwedwe Project has, since inception, spent its entire budget on broad based black economic empowerment objectives to achieve:

- twenty two (22) kilometres of road design and supervision undertaken by HDI Professional Engineers;
- eight (8) kilometres of road constructed in its entirety by Vukuzakhe emerging contractors;
- materials to the value of R 200,000 was procured from local suppliers; and
- three hundred and thirteen (313) local labour opportunities created.

As investments into ARRUP projects increase, so too, does the ability of the programme to unlock the economic potential of rural communities and their natural resources. The Department has identified the land, agricultural, water and other development potentials that exist in “development corridors” around all ARRUP projects. This Department’s immediate objective is to target a five (5) kilometre radius “development corridor” for concentrated development initiatives.

Thus, for example, in the Nongoma Project comprising the upgrading of main roads 235, 49 and 52, the following initiatives have been implemented or are planned under the “development corridor” approach to integrated and sustainable rural development.

The following local water resources are being developed and offset against an alternative budget of R9, 75 million required to haul water from the Umfolosi River:

- A weir, complete with fish ladder for environmental purposes, has been constructed on the Matshanyama River. This has already stimulated the development of two community gardens, a concrete block factory and a new site for community recreation and laundry purposes.
- A 7, 5 metre high dam wall across the Nzimane River with a storage capacity of approximately 50 000 m<sup>3</sup> has been planned. This will provide adequate storage for Hlabisa Town and allow for its expansion.
- Three (3) boreholes have been sited, drilled and test pumped. Major underground water resources have been identified which will be used to establish a range of agricultural projects including stock dams and irrigated gardens.

The small rural town of Hlabisa has been beautified with new sidewalks, paved areas and public transport facilities.

The introduction of “development corridors” has only been achieved through the co-operation of provincial and local government with the community at large. Increasingly, ARRUP “development corridors” are resulting in a wide range of government departments co-operating in planning and pooling their resources in the best interests of beneficiary communities. Corridor development promotes a more integrated response to the multi-dimensional and complex nature of poverty.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

Although ARRUP is still a very young programme, it is already clear that its innovative approach to road construction has contributed significantly to the social and economic empowerment of beneficiary communities. ARRUP is undoubtedly creating a bridge between the first and second economies in KwaZulu-Natal. It is anticipated that ARRUP policies, procedures and methodologies will provide a new framework and dispensation for road building in South Africa.

The following table represents the investments to date in the ARRUP programme.

**Table: ARRUP summary of expenditure to March 2005**

PROJ	ROAD NO.	DESCRIPTION	KM	EXPENDITURE	EXPENDITURE	EXPENDITURE	EXPENDITURE	EXPENDITURE	OUTPUTS TO DATE		
				2001/2002	2002/2003	2003/2004	2004/2005	TOTAL TO DATE	ROAD KM	STRUCTURES MAJOR	PERSON DAYS
Nkandla	P15/1&2	Washi River - Komo	25.6	0	1 614 872	5 223 391	15 175 223	22 013 486	4.2	1	24 714
Nkandla	P15-1&50/2	Ntonjani-Woshi River, Komo - Entumeni	21.5	0	0	0	406 389	406 389	0.0	0	0
Nkandla	P50/2	Komo - Nkandla Forest	23	0	405 213	904 5017	13 777 660	23 227 890	3.0	0	17 362
Nkandla	P50/3	Nkandla - Fort Louis	17.5	1 245 237	7 419 343	13 616 775	13 212 847	35 494 202	17.0	1	29 640
St Faiths	P68/1	Highflats - St Faiths	24	618 987	2 506 947	14 379 689	12 177 786	29 683 409	7.5	0	19 156
St Faiths	P68/2	St Faiths - Assisi	24.3	7 000 000	3 490 838	13 275 905	20 062 626	43 829 369	7.9	0	42 355
Ndwedwe	P100	Ndwedwe - Inanda	31.4	5 952 561	2 082 011	13 746 028	25 438 604	47 219 204	10.3	0	41 612
Nongoma	P235/1&2	Hlabisa - Nongoma	60	14 578 128	84 849 200	34 388 245	51 409 033	185 224 606	28.7	11	76 976
Nongoma	P49/2	Nongoma - Mkhuze River	29.6	0	0	0	4 266 536	4 266 536	0.0	0	1 122
Nongoma	P52/3	Nongoma - Ngome	27.7	0	0	287 856	332 483	620 339	0.0	0	0
Ongoye	P240	Obanjeni - KwaMaqwakazi	28.6	623 320	4 362 950	17 521 166	31 538 263	54 045 699	5.2	4	31 988
Ongoye	P230	Mandawe - KwaNeekwane	31	0	0	0	358 639	358 639	0.0	0	0
Osizweni	P296/38	Osizweni - P272	27.3	345 471	1 045 461	11 060 993	16 108 332	28 560 257	4.5	0	24 172
Vulindlela	P399	Nxamalala - Taylors Halt	12.8	427 909	1 025 278	10 480 874	12 959 659	24 893 720	1.5	2	15 532
<b>Total</b>				<b>30 791 613</b>	<b>108 802 113</b>	<b>143 025 939</b>	<b>217 224 080</b>	<b>499 843 745</b>	<b>89.8</b>	<b>19</b>	<b>324 629</b>

PROJ	ROAD NO.	DESCRIPTION	KM	EXPENDITURE	EXPENDITURE	EXPENDITURE	EXPENDITURE	EXPENDITURE	OUTPUTS TO DATE		
				2001/2002	2002/2003	2003/2004	2004/2005	TOTAL TO DATE	ROAD KM	STRUCTURES MAJOR	PERSON DAYS
Cabinet Projects	P577	Duff's Road - KwaDabeka	14	0	0	24 602 000	46 045 531	70 647 531	0.0	3	46 938
	P700	Ulundi - Richards Bay	89.6	0	0	23 400 000	32 654 253	56 054 253	14.0	3	30 217
<b>Total</b>			<b>103.6</b>	<b>0</b>	<b>0</b>	<b>48 002 000</b>	<b>78 699 784</b>	<b>126 701 784</b>	<b>14.0</b>	<b>6</b>	<b>77 155</b>

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

The following pictures demonstrate part of a road that has been constructed under this project.



*P240 : Ongoye Link Road : Start of the Project KM 0,0*



*P240 : Ongoye Link Road : Km 0,7*

**Cabinet Projects:** Two major road construction projects, namely Main Road 577 from Duff's Road to Clermont and Main Roads 700 and 701, a new link between Ulundi and Empangeni had been supported by Provincial Cabinet. Good progress had been made on both projects.

#### **P577: Duff's Road to Kwa-Dabeka**

- Main Road 577 is a proposed high standard dual carriageway urban arterial extending from Duff's Road to Kwa-Dabeka, over a distance of 14 kilometres. Once completed it will provide an alternative east-west link between the greater Inanda, Ntuzuma, KwaMashu, Phoenix and Newlands residential areas and the Pinetown/ New Germany industrial and commercial complex. The arterial will cross the Mgeni River on a high-level viaduct.
- Construction of this four-lane urban arterial with signalised intersections commenced in April of the 2003/04 financial year and the project is expected to be completed during the 2008/09 financial year.
- The first five (5) kilometre section of P577 between Duff's Road and Inanda Road will be opened to traffic during the forthcoming financial year. This is scheduled to coincide with the opening of Nandi Drive between the N2 and P577, a project being funded by the eThekweni Municipality.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

##### Physical Progress

- Earthworks between Duff's Road and Inanda Road has been completed and the layer-works construction is in progress. The Vukuzakhe contractor has set up a casting yard on site and is manufacturing 100 kerbs a day which is within the set target.
- The soft earthworks on the 600 metre section of Inanda Road are also complete. This section required blasting. The blasted rock is being removed and stockpiled for use in the construction of rock toes in phase two (2). However, due to rocks, the project is delayed and is envisaged to be completed during the forthcoming financial year. Shortly, three (3) Stage 1 contractors will be commencing the ancillary works.



Construction of kerb and channel on P577

##### P 700 : Ulundi to Hluhluwe /Mfolozi Park

Main Road 700 is to be constructed in the following two phases:

- Phase 1: Description: Ulundi to Hluhluwe Mfolozi Park  
Length: 35 kilometres
- Phase 2: Description: Hluhluwe Mfolozi Park to Empangeni /Richards Bay  
Length: 55 kilometres

The construction on Phase One (1) began during the 2003/04 financial year and during the 2004/05 financial year, the following progress was made.

- The portion of road between kilometre three (3) and kilometre 14 (11 kilometres) has been surfaced resulting in the first 14 kilometres being surfaced. To date, some 75 000 m<sup>2</sup> of material has been moved.
- The two (2) bridges, namely Ntukwini and Mtonjaneni have been widened and two culverts constructed.
- 16 400 person days of work was created resulting in R1,1m going back to the community.



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



*Umsimbiti Base Course Construction on site*



*Mpuze River Bridge Under Construction*



*Road P700 Nearing Final Completion*

Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



Completed section of Road P700

#### Road Outputs

Heavy summer rains caused extensive damages and delays in construction activities. However, the Department managed to meet most targets, and only an insignificant fraction of the total target could not be achieved.

Table: Construction of Road Infrastructure by Region

Performance Measure	Actual Outputs 2003/04	Target Outputs 2004/05	Actual Outputs 2004/05	% Deviation from Target	
				Unit	%
<b>Region 1: Empangeni</b>					
Highways (no of km)					
Surfaced roads (excluding highways) (no of km)	30	41	43	2	4.9
Gravel roads (no of km)	258	356	348	(8)	(2.2)
Unsurfaced dirt roads (no of km)					
Bridges with span > 2 metre (No.)	3	5	9	4	80
Pedestrian bridge (No.)					
Causeways (No.)	26	23	20	(3)	(13)
<b>Region 2: Ladysmith</b>					
Highways (no of km)					
Surfaced roads (excluding highways) (no of km)	2	3	3		
Gravel roads (no of km)	177	146	157	(11)	(7.5)
Unsurfaced dirt roads (no of km)					
Bridges with span > 2 metre (No.)		1	1		
Pedestrian bridge (No.)					
Causeways (No.)	6	12	14	2	16.7



Part 2



## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

**Table: Construction of Road Infrastructure by Region**

Performance Measure	Actual Outputs 2003/04	Target Outputs 2004/05	Actual Outputs 2004/05	% Deviation from Target	
				Unit	%
<b>Region 3: Pietermaritzburg</b>					
Highways (no of km)					
Surfaced roads (excluding highways) (no of km)	20	2	6	4	300
Gravel roads (no of km)	109	59	61	2	3.3
Unsurfaced dirt roads (no of km)					
Bridges with span > 2 metre (No.)	5	0	1		
Pedestrian bridge (No.)					
Causeways (No.)	16	9	9		
<b>Region 4: Durban</b>					
Highways (no of km)					
Surfaced roads (excluding highways) (no of km)	2	20	21	1	5
Gravel roads (no of km)	130	79	94	15	19
Unsurfaced dirt roads (no of km)					
Bridges with span > 2 metre (No.)	3				
Pedestrian bridge (No.)					
Causeways (No.)	14	14	14		
<b>Province</b>					
Highways (no of km)					
Surfaced roads (excluding highways) (no of km)	54	66	73	7	10.6
Gravel roads (no of km)	674	640	660	20	3.1
Unsurfaced dirt roads (no of km)					
Bridges with span > 2 metre (No.)	11	6	11	5	83.3
Pedestrian bridge (No.)		2	2		
Causeways (No.)	62	58	57	(1)	(1.7)

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

##### Sub-Programme 2.5: Maintenance

##### Provincial Road Maintenance

Due to the ever increasing traffic volumes experienced on the province's road network, as well as general ageing of the existing road network, more funds and attention has been required to maintain roads to an acceptable standard. Notwithstanding the limited funds available for general road maintenance, the Department made achievements through its road maintenance programmes during the year under review.

##### Preventative Maintenance: Blacktop Road Resealing

All blacktop roads experience a drying out of the bitumen or tar used in the process after construction. The rate of deterioration depends mainly on the traffic volumes on the road as well as climatic conditions. Invariably, most blacktop roads need to be resealed by the time they are 8 – 10 years old. If this resealing is performed diligently, it controls the ageing of the road and prevents early rehabilitation. This programme is thus critical in preventative maintenance and needs to be funded adequately.

During the year under review, a total of 679 942m<sup>2</sup> (approximately 72 kilometres) of blacktop resealing had been performed.



*Road D173 Before Resealing*



*Road D173 After Resealing*



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

##### Regravelling

Regravelling of rural roads is crucial. Access to services such as schools, clinics, medical facilities, etc, is severely hampered if roads are not regravelled. Due to scarce suitable gravel sources, the cost of regravelling has escalated. This is of particular concern in environmentally sensitive areas where opening of new quarries is not permitted. This results in long delays, long haul distances and as a consequence, less gravelling can be performed.

A total of 906 kilometres of road had been regravelled throughout the province. Although this is below the target, the Department has made considerable progress as a result of additional work performed to catch up with some of the backlog.

Included in the total kilometres of road is a 3,3 kilometre of gravel road, pictured below, which had been regravelled by a stage 2 contractor. A total of 480 person days of work was created to benefit commercial farmers, transporters of timber, communities to access schools, farms, industrial areas, and other linkages in this project.



*Road: P 309*

Another project of fourteen (14) kilometres had been undertaken in the Greytown area on D1639. This road is from Vukapansi to Washi River Road and connects a large community to a clinic and small local businesses.

The project commenced in May 2004 and heavy reshaping of the road for gravelling had been undertaken. Regardless of challenges such as heavy rocks and fencing that were encountered during construction, the project was completed during March 2005



*Road D1639 before reshaping of the road*

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



*Road D1639 after reshaping of the road*

Road P444 pictured below from Nseleni to Ophande River in the uMhlabuyalingana RRTF serves as the main road in the Jozini Area, and was also regravelled. It connects lodges, schools, a clinic and game reserves that are along the road.



*Road P444*

#### Blacktop Road Rehabilitation

Due to financial constraints and a history of insufficient funds for blacktop rehabilitation, the Department had and still has, a backlog.

Despite the aforementioned, the Department performed well during the 2004/05 financial year. A total of 462 558m<sup>2</sup> (approximately 49 kilometres) of light rehabilitation and 438 546m<sup>2</sup> (approximately 46 kilometres) of heavy rehabilitation work was complete during the past financial year.

However, in light of the 2010 Soccer World Cup, this programme needs additional funding to ensure that the province's road network is capable of accommodating higher volumes of traffic, anticipated on the major road links. New blacktop roads which have been added to the network



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

over the last ten years will also gradually require additional maintenance in the form of resealing and some rehabilitation work. Thus, additional funds will be required to cater for this additional demand.

Pictured below are parts of one of the roads that was rehabilitated during the past financial.



*P93 Verulam to Inanda Road and the N2 Interchange-Malandela Road*



*A portion of Mandela Road*

Rehabilitation of Road P82 had been challenging due to high traffic volumes. Thus, strategic site meetings to address safety of road users had to be given high priority. During 2004/05 financial year 1.6 kilometres of this road had been rehabilitated.

Various portions of Road P82, (Pinetown – Edwin Swales VC Drive) were also rehabilitated with concrete inlays as shown in the following pictures.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



*Sections of Road P82 During Rehabilitation*

#### **Routine Maintenance:**

Routine maintenance is performed along all provincial roads within the Province. The Department has successfully carried out the following activities in 2004/2005 financial year comprising of 107 826m<sup>2</sup> of blacktop patching and 79 009 kilometres of blading.

#### **Zibambele Road Maintenance Programme**

Zibambele, which means "doing it for ourselves", is a form of routine road maintenance using labour intensive methods in which a family or household is contracted by the KwaZulu-Natal Department of Transport to maintain a specific length of road on a part-time basis. The Zibambele programme specifically targets long-term unemployed persons in rural communities. In its initial phase the programme focused on those families that rural communities themselves identify as most destitute. It is a strongly gender affirmative programme in that, thus far, some 95% of all Zibambele contracts have been awarded to women headed households. This programme has managed to change the gender stereotypes by allowing women to play a role within the construction industry and maintenance of the KwaZulu-Natal rural road network, while creating opportunities for them to provide income for their families.

The contractors are expected to work a maximum of sixty (60) hours per month allowing adequate time for other activities. The duties performed include maintaining the road drainage system, ensuring good roadside visibility and maintaining the road surface in good condition. At the end of the 2004/05 financial year, 23 451 Zibambele contracts were awarded.



Part 2

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE



*Zimbabwe contractors clearing drains along D1133 known as (KwaNzokane Loop Road) in the Vulindlela RRTF area, Pietermaritzburg*



*Zimbabwe Road Workers Opening Up Drains*

A number of external evaluations had been conducted to investigate both the impact and effectiveness of the programme. The results of the evaluation conducted by SALDRU revealed that the programme offered a highly cost effective public works model regarding creation of employment and transferring resources to participants.

In November 2004, the programme was nominated for the Standard Bank CPIS Public Sector Innovations Awards which recognizes innovations by the public and private sector. The programme was the second runner up in the Public Sector: Service Partnerships Category. The investment into the Zimbabwe programme is listed in the following table.

## Part 2

### REPORT OF THE HEAD OF TRANSPORT

#### PROGRAMME 2: ROAD INFRASTRUCTURE

**Table: Zimbabwe Investments**

	Financial Years						Total
	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	
Total Payments to Zimbabwe Contractors (R millions)	R10.0	R18.1	R42.0	R54.6	R66.6	R87.0	R278.3
No. Of Zimbabwe contractors (person years)	1 031	6 031	9 856	14 910	17 104	23 451	23 451
Length of roads maintained by contractors	1 186	3 920	6 406	9 692	11 118	15 423	15 423
Zimbabwe training budget (R millions)	R1	R1	R3	R3	R4	R3	R15
Monthly salary paid to Zimbabwe contractors	R250	R250	R334	R334	R350	R370	R370

#### Flood Damage:

Heavy rains in January and February 2005 caused substantial damage to local road structures. The flood damages were quite extensive, ranging from gravel that was washed away off roads, pipe culverts that were washed away, rock falls and mudslides, etc. Those damages severely affected access on the road; hence urgent repairs had to be undertaken.



*Damaged Mbhekani Structure*

#### Maintenance Outputs:

The following tables, show in summary, performance on road maintenance by the Department:





# Part 2

## REPORT OF THE HEAD OF TRANSPORT

### PROGRAMME 2: ROAD INFRASTRUCTURE

**Table: Maintenance Performance (2003/04 - 2004/05)**

Measurable Objective	Performance Measure	Actual Outputs 2003/04	Target Outputs 2004/05	Actual Outputs 2004/05	Deviation from Target	
					Unit	%
<b>Input</b>						
Maintenance as % of Programme 2 budget	Percentage	50.7%		40.0%		
<b>Process</b>						
Projects started on schedule	Percentage			67%		
Projects started more than 3 months late	Percentage			11.5%		
% difference between actual and planned expenditures:	% deviation					
· 1st quarter				49%		
· 2nd quarter				61%		
· 3rd quarter				86%		
· 4th quarter				124%		
<b>Output</b>						
Light Rehabilitation	Number of km <sup>2</sup>	0.545524	0.550000	0.462558	(0.087442)	(15.9)
Heavy Rehabilitation	Number of km <sup>2</sup>	0.244471	0.330000	0.438546	0.108546	32.9
Reseal tarred roads	Number of km <sup>2</sup>	0.674098	0.750000	0.679942	(0.070058)	(9.3)
Perform blacktop patching	Number of km <sup>2</sup>	0.125401	0.090000	0.107826	0.017826	19.8
Blade Gravel Roads	Number of km <sup>2</sup>	79225	75000	79009	4009	5.3
Re-Gravel Roads	Number of km <sup>2</sup>	1 190	800	906	106	13.3
Blade unsurfaced dirt roads	Number of km <sup>2</sup>					
<b>Efficiency</b>						
Projects completed on schedule	Percentage			80%		
Projects completed more than 3 months later than scheduled	Percentage			10%		