

PAVEMENT RIDING QUALITY REPORT 2007/2008



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1.0 Introduction

Pavement roughness is generally defined as an expression of irregularities in the pavement surface that adversely affect the ride quality of a vehicle (and thus the user). Roughness causes a number of problems to the highway user, including poor ride quality, unsafe driving conditions, excitation of truck dynamics leading to further pavement deterioration, and damage to vehicles and cargo.

Roughness is an important pavement characteristic because it affects not only ride quality but also vehicle delay costs, fuel consumption and maintenance costs. Pavement roughness is also a sign of distress and provides some indication of the remaining life of the pavement.

There are two basic approaches to measuring ride quality. The first approach measures the effect of roughness on ride quality through rating panels or equipment correlated with rating panels. A panel of drivers and passengers ride over sections of the highways in passenger cars and rate the roughness of the pavement in a scale of 0 to 5, five being a perfectly smooth ride. The rating units are referred to as Present Serviceability Index (PSI).

The second approach, called profiling, describes pavement surfaces independent of the measuring equipment. A relatively simple way to estimate ride quality using this approach is to measure the dynamic response of a passenger car as it is driven over a pavement. The accumulated suspension deflections over the length of the test sections are recorded and the results are expressed as the ratio between suspension deflections in meters and the length of the test section in kilometers. This roughness index of m/km has been in use for many years. The International Roughness Index (IRI) is the most commonly used standard used for profiling. The method used by the Department of Transport falls in this category.

The Field Monitoring component of the T² Centre carries out annual pavement roughness measurements on the entire paved road network using a Linear Displacement Integrator (LDI). The data is used to give an indication of the roughness status of the paved road network under the jurisdiction of the department and, more importantly, as a performance input into the Pavement Management System (PMS). This report summarizes the results of the LDI surveys carried out during the 2007/2008 financial year.

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2.0 Provincial Road Network

The declared network of provincial and district roads falling under the responsibility of the KwaZulu-Natal Department of Transport is approximately 25,701km. About 7,153km are paved and 18,548km are unpaved.

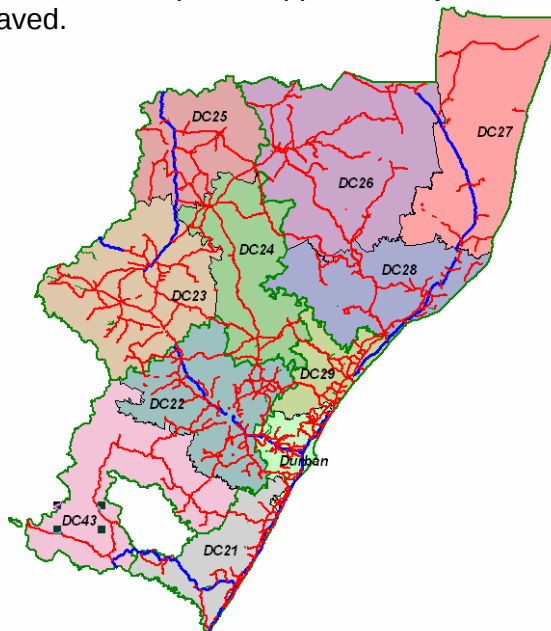


Table 1: Road Length Distribution by Surface Type

Region	Blacktop	Unpaved	Total (km)
Durban	1,705	2,994	4,699
Empangeni	1,940	6,778	8,718
Ladysmith	1,934	3,716	5,650
Pietermaritzburg	1,479	4,618	6,097
Unknown*	95	442	537
Total	7,153	18,548	25,701

* Roads for which a regional allocation has yet to be made in the network database.

Of the 7 153 km of paved roads, 6 800 km are classified as provincial and 353 km as district roads. LDI measurements were done in the whole paved network. There were a few roads that were not surveyed because of technical difficulties.

Table 2: Classification of Blacktop Roads

Region	Provincial Roads	District Roads	Total (km)
Durban	1,526	179	1,705
Empangeni	1,906	34	1,940
Ladysmith	1,835	99	1,934
Pietermaritzburg	1,441	38	1,479
Unknown*	92	3	95
Total	6,800	353	7,153

*Roads for which a regional allocation has yet to be made in the RMS

3.0 LDI Measurements

The LDI test is performed using a response type system consisting of the following three main components:-

- The measurement vehicle
- The transducer that detects the relative movement of the suspension.
- A recording system and display which is connected electronically to the transducer

The LDI equipment is installed in a special passenger vehicle with an independent rear axle and a coil spring suspension system. The equipment measures the response of the vehicle to the road profile as the vehicle travels at a steady speed. The test is usually performed at 80km/h.

The transducer measures the movement of the suspension in “counts” or millimeters. When the counts or total millimeters are summed, a parameter is obtained which gives an indication of the total suspension stroke that occurred over the length of the test section. The total count of summed millimeters of travel is divided by the length of the test section to obtain the Average Rectified Slope (ARS).

This output from the LDI device is then converted to IRI which is the preferred parameter for quantifying roughness, by using a procedure known as ‘correlation by calibration’.

The LDI vehicle is driven at a constant speed of 80km/h along the test in both the positive and negative directions. The roughness measurements are stored in a special database from which reports can be drawn.



Figure 1: LDI Measurement Vehicle

4.0 Calibration

The purpose of calibration is to confirm that all components of the profiler system work correctly and to ensure that all individual components are correctly calibrated in an effort to provide consistent results.

During this process the output of the profiler is compared to the known profiles and IRI values on several calibration sections, each 500m in length. These sections are profiled before hand using a Class 1 measurement device (typically an AARB Walking Profiler or Face Dipstick). The benchmark IRI values are then calculated for each section using a standard method.

The validation includes checks on the variation between the output of repeat runs performed at 80km/h, and a correlation between the IRI measured with the Profiler and the benchmark IRI values from the Class 1 device. The suggested acceptance criterion for the absolute difference between the measured and benchmark IRI is that 80% of the values must be less than 8%.

It is critical to note that key aspects of the test vehicle such as shock absorbers and tyre pressure are checked regularly to ensure that the measurements are as accurate as possible.

The test vehicle was calibrated in June 2007 at the sites surrounding Pietermaritzburg in KwaZulu Natal.

5.0 IRI Rating Scale

The International Roughness Index (IRI) was developed by the World Bank in the 1980s. IRI is used to define a characteristic of the longitudinal profile of a travelled wheel track and constitutes a standardized roughness measurement. The commonly recommended units are meters per kilometer (m/km) or millimeters per meter (mm/m). The IRI is based on the average rectified slope (ARS), which is a filtered ratio of a standard vehicle's accumulated suspension motion (in mm, inches, etc.) divided by the distance traveled by the vehicle during the measurement (km, mi, etc.). IRI is then equal to ARS multiplied by 1,000. The open-ended IRI scale is shown in Figure 2.

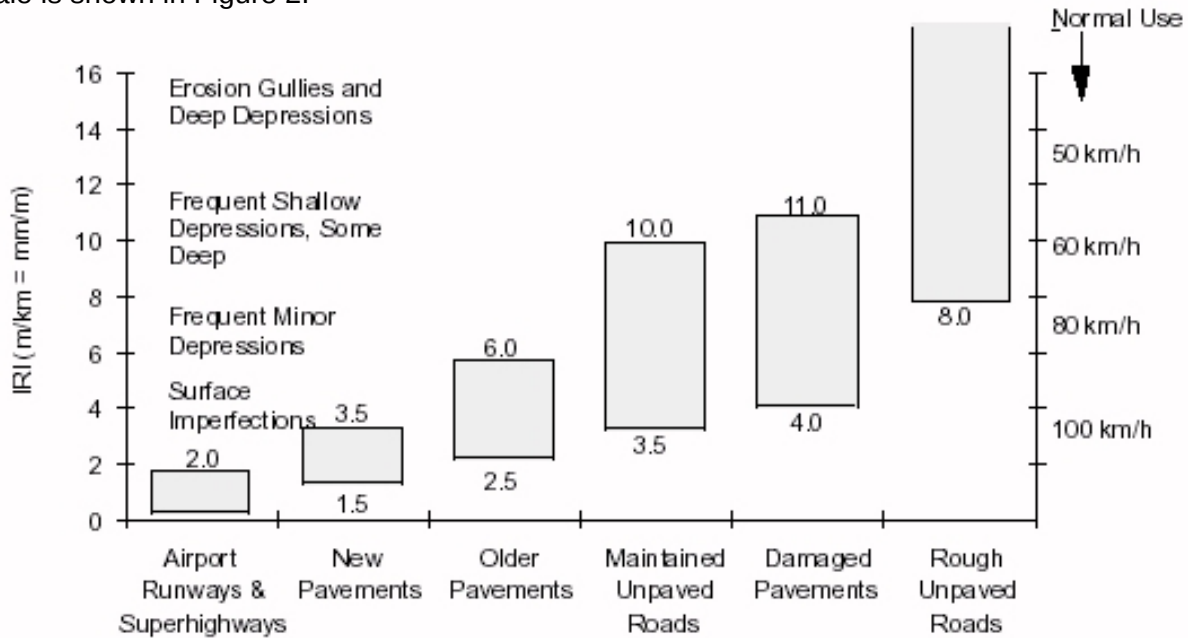


Figure 2: IRI Roughness Scale

For the purposes of this report the roughness condition of the LDI surveys were rated according to the scale give in Table 3 below.

IRI Range (mm/m)	Condition Rating
< 2.0	Very Good
2.0 – 3.2	Good
3.2 – 4.0	Fair
> 4.0	Poor

Table 3: Condition Rating for LDI

6.0 Measured Network Roughness

LDI measurements are taken at 100m intervals in each direction over the test road. The LDI measurements at each interval are converted to an IRI value. The average IRI over the test section is taken as the IRI of the road in the direction of measurement. The average roughness of the road can be obtained as the mean of the IRI in both the positive and negative test directions.

A weighted average is calculated to make it possible to compare overall road roughness conditions within different geographical regions. The weighting is done based on the length of each road and the total length of roads within the geographical area. The following roughness measurements are calculated in this manner.

6.1 Network Roughness at Regional Level

The weighted IRI for each of the departmental regions is summarized in Table 4. It is apparent from the data that on average Empangeni region has the roughest roads while Durban region has the smoothest. The overall weighted IRI for all provincial paved roads is 3.35

Region	IRI	Rating
Empangeni	3.42	Fair
Ladysmith	3.34	Fair
Pietermaritzburg	3.37	Fair
Durban	3.25	Fair
Overall	3.35	Fair

Table 4: Weighted IRI per Region

Figure 3 shows the distribution of roads rated as “Good” “Fair” and “Poor” for each region. The regions with the rougher roads tend to have a higher percentage of roads rated as “Fair” and “Poor”

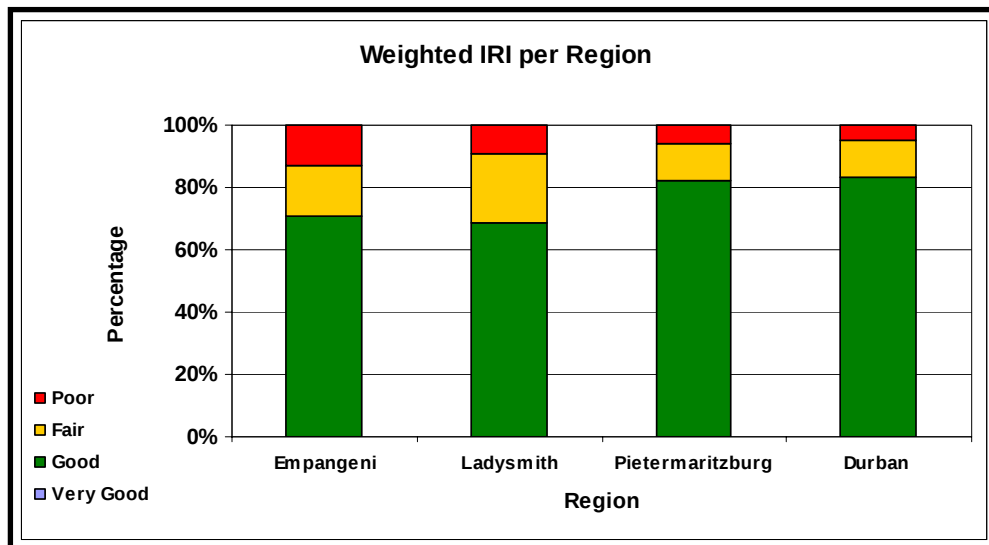


Figure 3: Weighted IRI per Region

6.2 Network Roughness at Cost Centre Level

The IRI levels for each road were also weighted to give an indication of the overall prevailing roughness of paved roads at cost centre level. The results are presented in Table 5.

Cost Centre	IRI	Rating
DC 26	3.10	Good
DC 27	4.03	Poor
DC 28	3.14	Good
DC 23	3.42	Fair
DC 24	3.57	Fair
DC 25	3.04	Good
DC 22	3.32	Fair
DC 43	3.41	Fair
DC 21	3.47	Fair
Durban	3.01	Good
DC 29	3.28	Fair

Table 5: Weighted IRI per Cost Centre

The results presented in the form of the percentage of roads falling with each rating category in Figure 4. As observed previously, the cost centres with rougher roads have higher percentages of roads rating as “Fair” and “Poor”.

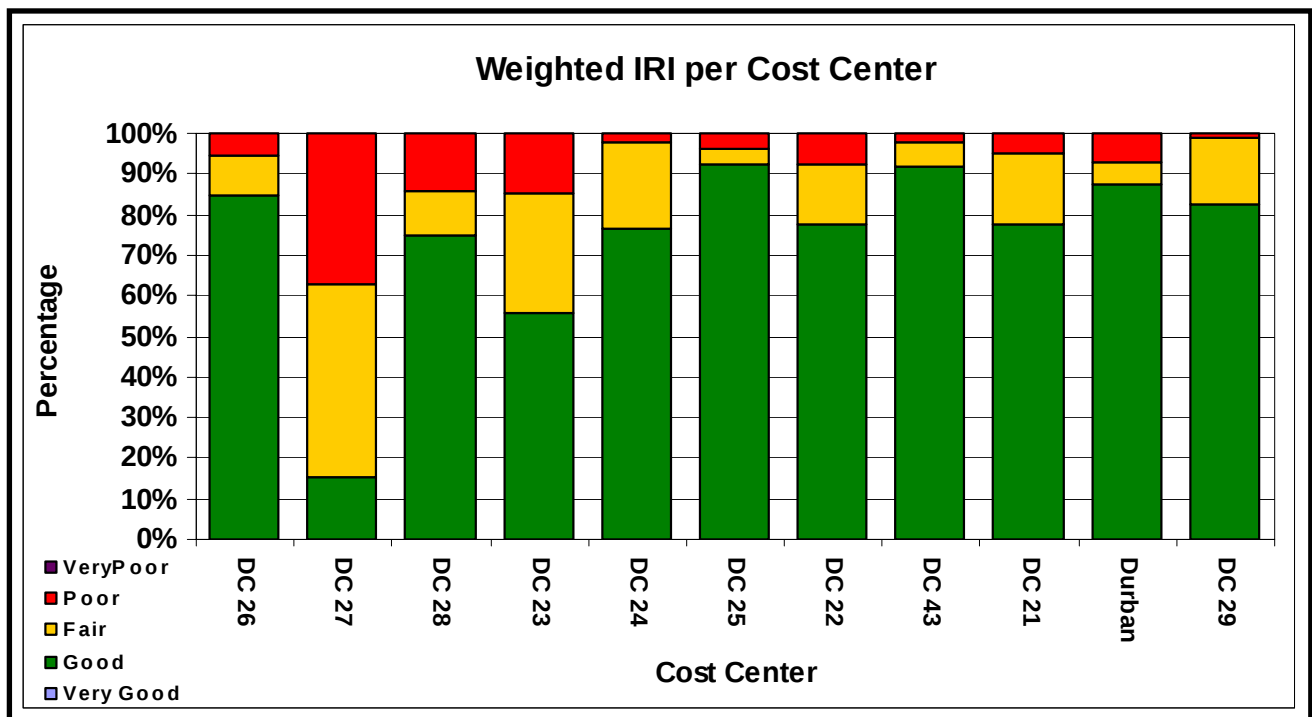


Figure 4: Weighted IRI per Cost Centre

7.0 Yearly Roughness Variations

This is the first year that the Department is able to compare roughness measurements with previous measurements. The comparisons could not be done previously due to the fact that the Department purchased and fitted a new LDI vehicle in 2005. The design of the new vehicle is different to the previous LDI vehicle in a number of respects and also that the current measurements of roughness are done in IRI while previously roughness was reported in QI (Quarter Car Index) and PSI. It was not possible, therefore, to compare previous roughness measurements with the current. However in 2007 a comparison has been done to indicate trends of overall road roughness with time which is presented in Table 6 and Figure 5 below.

7.1 Yearly Roughness Variations at Regional Level

The weighted IRI for each of the departmental regions for each year is summarized in Table 6. It is apparent from the data that the riding quality of the network has deteriorated in the past year with Empangeni region still having the roughest roads in 2007 while Durban region has the smoothest in 2007 as apposed to Pietermaritzburg region in 2006. The overall weighted IRI for all provincial paved roads in 2007 is 3.35 which have deteriorated from 2.94 in 2006.

Region	IRI 2006	Rating 2006	IRI 2007	Rating 2007
Empangeni	3.37	Good	3.42	Fair
Ladysmith	2.80	Good	3.34	Fair
Pietermaritzburg	2.72	Good	3.37	Fair
Durban	2.85	Good	3.25	Fair
Overall	2.94	Good	3.35	Fair

Table 6: Yearly Roughness Variations per Region

Figure 5 shows the annual roughness variation at regional level for each year giving a visual indication of the deterioration.

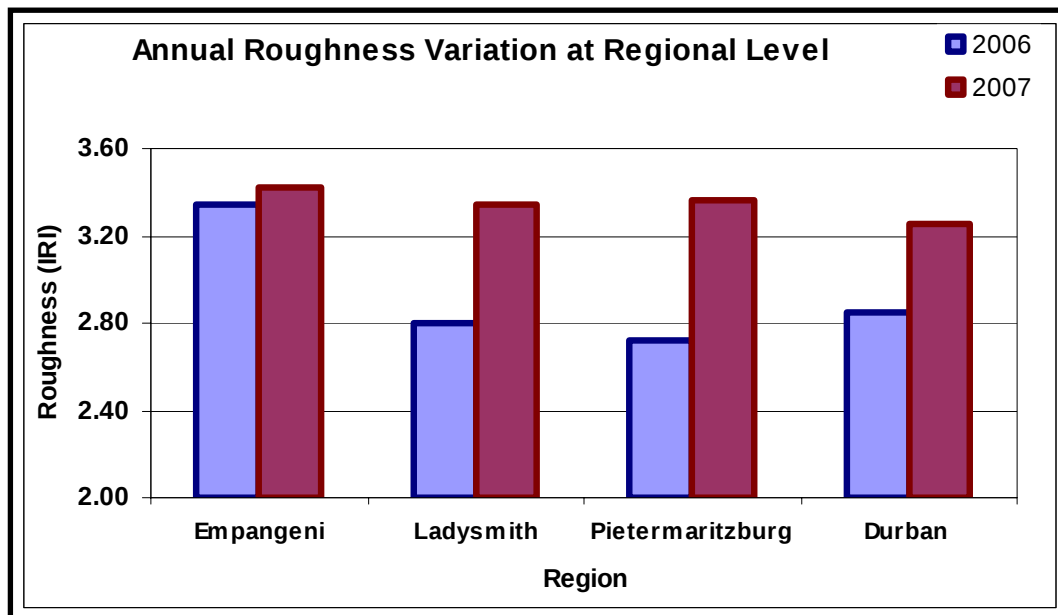


Figure 5: Yearly Roughness Variations per Region

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Figure 6 give an indication of the distribution of roads rated as “Good” “Fair” and “Poor” for each of the regions for each year.

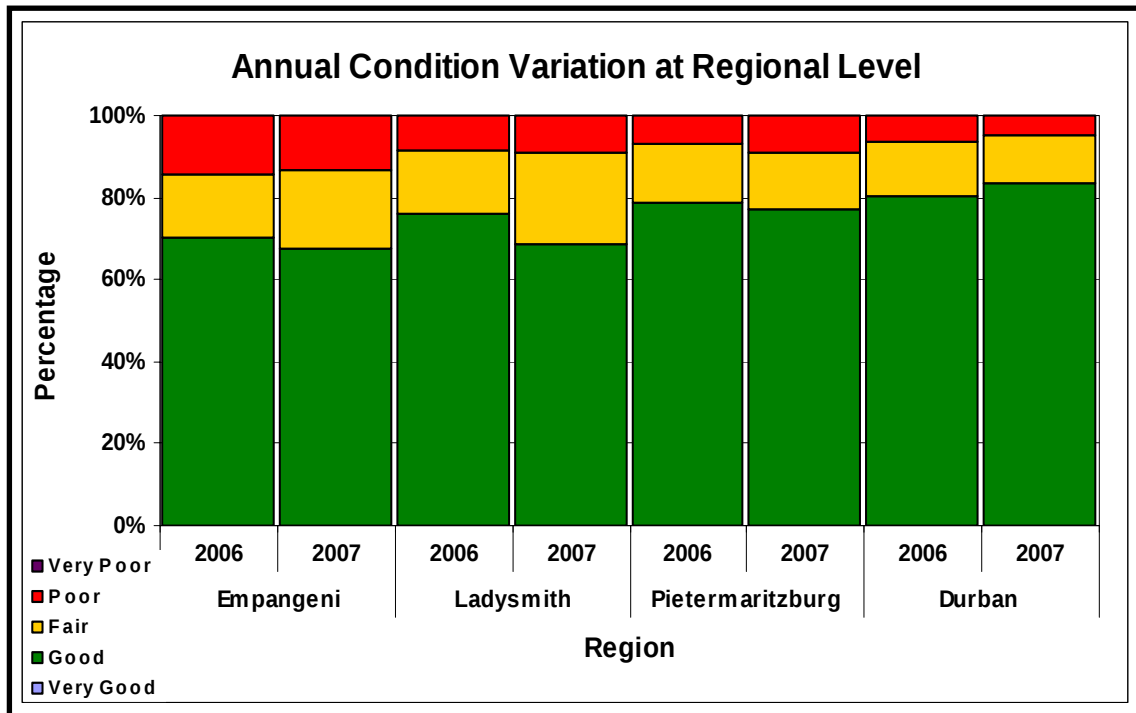


Figure 6: Annual Condition Variation per Region

7.1 Yearly Roughness Variations at Cost Center Level

IRI levels for each road were weighted to give an indication of the overall prevailing roughness of paved roads at cost centre level and an annual comparison was made. The results are presented in Table 7.

Cost Centre	IRI 2006	Rating 2006	IRI 2007	Rating 2007
DC 26	2.84	Good	3.10	Good
DC 27	4.22	Poor	4.03	Poor
DC 28	2.97	Good	3.14	Good
DC 23	3.01	Good	3.42	Fair
DC 24	2.94	Good	3.57	Fair
DC 25	2.45	Good	3.04	Good
DC 22	2.88	Good	3.32	Fair
DC 43	2.55	Good	3.41	Fair
DC 21	3.01	Good	3.47	Fair
Durban	2.93	Good	3.01	Good
DC 29	2.60	Good	3.28	Fair

Table 7: Annual Roughness Variations per Cost Center

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Figure 7 shows the annual roughness variation at regional level indicating deterioration in the riding quality in 2007.

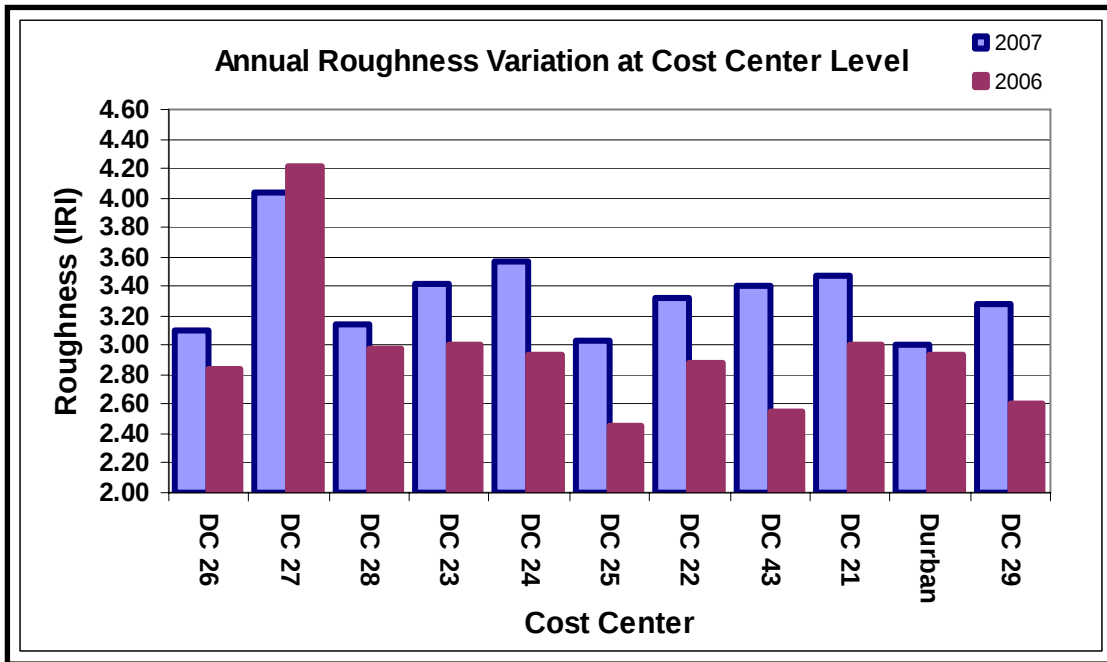


Figure 7: Yearly Roughness Variations per Cost Center

Figure 8 as well as the distribution of roads in the form of the percentage of roads falling with each rating category i.e. "Good" "Fair" and "Poor" for each of the Cost Centers for each year.

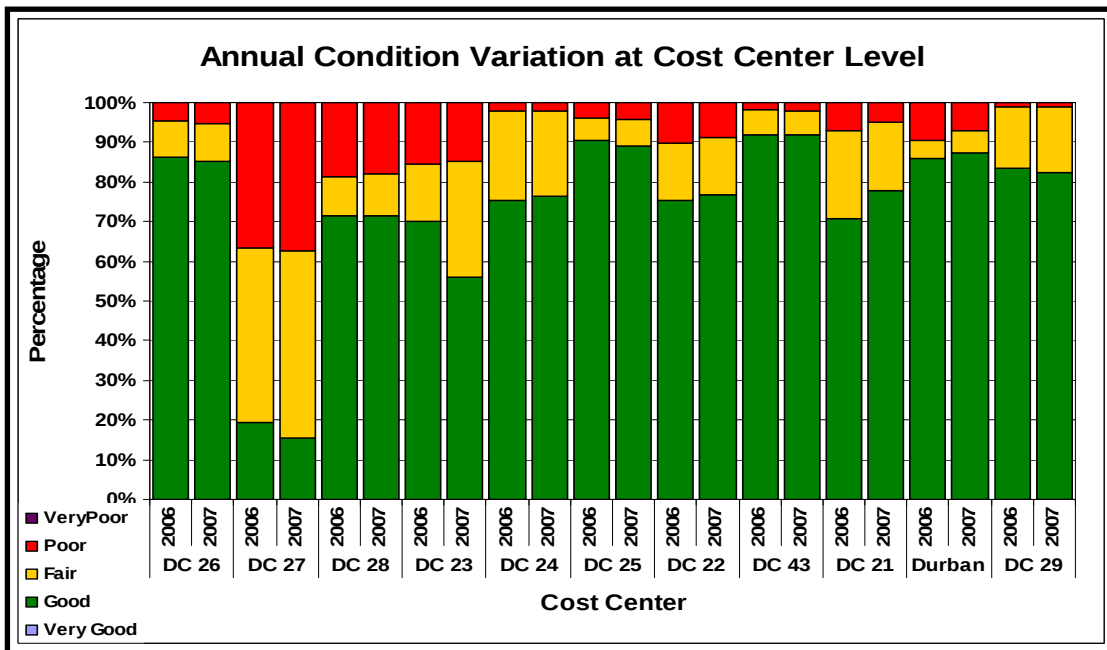


Figure 8: Annual Condition Variation per Cost Center

9.0 Conclusions

The report presents a detailed picture of surface roughness of the paved network based on measurements of IRI. The results generally indicate that the roughness of the network is not critical, but of a fair standard. This must however be interpreted in the context that a smooth road is not necessarily without structural defects. Structural defects only begin to affect surface roughness when they become critical.

This is the second time that measurements of IRI have been made with a new LDI device and T2 is in the process of building up a database of historical measurements to verify the consistency of the IRI measurements. We believe that the situation will improve in the coming years as more historical data becomes available.

APPENDIX A

IRI Sorted by Road Number



Report per Region per Cost Centre : Sorted by Road Number

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 26	D1721	3.45	3.18	1.16	0.36	GOOD
	D1931	0.71	2.91	1.29	0.44	GOOD
	D1935	1.22	4.03	2.24	0.56	FAIR
	D268	1.38	2.75	0.91	0.33	GOOD
	D427	3.51	4.35	1.25	0.29	POOR
	D872	1.08	2.87	1.39	0.48	GOOD
	P16-4	2.10	4.10	1.94	0.47	FAIR
	P221	14.21	2.55	0.64	0.25	GOOD
	P234	13.94	4.43	1.48	0.33	POOR
	P236	7.50	3.57	1.43	0.40	FAIR
	P244-1	3.18	3.66	1.14	0.31	FAIR
	P258	5.30	3.45	1.27	0.37	GOOD
	P268	10.27	3.10	1.80	0.58	GOOD
	P271	12.70	2.76	0.95	0.34	GOOD
	P287	4.50	4.33	1.79	0.41	POOR
	P289	6.02	2.34	0.81	0.35	GOOD
	P301	16.97	3.38	1.34	0.40	GOOD
	P303	0.70	2.73	1.20	0.44	GOOD
	P309-1	6.93	2.70	0.88	0.33	GOOD
	P309-2	13.90	2.45	0.59	0.24	GOOD
	P313	8.60	2.37	1.11	0.47	GOOD
	P34-3	30.77	2.03	1.17	0.58	GOOD
	P34-4	26.19	2.91	0.95	0.33	GOOD
	P34-5	16.94	2.67	0.89	0.33	GOOD
	P40	25.27	4.73	1.92	0.41	POOR
	P40	25.27	3.07	1.24	0.40	GOOD
	P404	48.47	2.48	0.90	0.36	GOOD
	P432	1.22	1.87	0.66	0.35	GOOD
	P433	8.57	3.17	1.26	0.40	GOOD
	P433	8.57	3.44	1.34	0.39	GOOD
	P434	2.88	2.01	0.61	0.30	GOOD
	P45	0.93	3.53	1.65	0.47	FAIR
	P46-1	18.22	2.62	0.73	0.28	GOOD
	P46-2	45.13	2.69	0.90	0.33	GOOD
	P46-2	45.13	2.87	0.97	0.34	GOOD
	P463	17.66	3.24	1.19	0.37	GOOD
	P46-3	33.81	2.66	0.55	0.21	GOOD
	P46-4	7.77	3.11	0.96	0.31	GOOD
	P47-1	33.12	1.53	0.52	0.34	GOOD
	P47-2	37.91	1.73	0.36	0.21	GOOD
	P47-3	56.67	2.13	0.69	0.32	GOOD
	P48	70.49	3.68	1.08	0.29	FAIR



Report per Region per Cost Centre : Sorted by Road Number

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 27	P49-1	53.92	2.69	0.74	0.28	GOOD
	P49-2	4.60	4.80	2.26	0.47	POOR
	P498	0.70	4.70	1.95	0.41	POOR
	P51	4.26	3.32	1.03	0.31	GOOD
	P52-1	25.66	3.09	0.98	0.32	GOOD
	P52-2	54.21	3.27	1.18	0.36	GOOD
	P523	12.28	2.53	1.68	0.66	GOOD
	P52-3	34.58	3.24	1.00	0.31	GOOD
	P54	38.95	3.22	1.04	0.32	GOOD
	P700	1.43	3.88	0.85	0.22	FAIR
	P702	4.78	3.60	1.30	0.36	FAIR
	P720	9.72	3.13	0.99	0.32	GOOD
	D127	1.31	3.52	1.44	0.41	FAIR
	P235-1	29.00	3.39	1.25	0.37	GOOD
	P237	28.98	3.89	0.98	0.25	FAIR
	P2-6	2.33	3.84	1.69	0.44	FAIR
	P2-9	1.36	3.42	1.52	0.44	GOOD
	P38	12.00	3.84	1.28	0.33	FAIR
	P396	2.00	4.51	2.69	0.60	POOR
	P397	10.08	3.52	0.91	0.26	FAIR
	P410	2.19	2.52	0.64	0.25	GOOD
	P414	10.62	2.90	0.82	0.28	GOOD
	P443	21.88	6.15	1.60	0.26	POOR
	P449	2.60	5.55	1.97	0.35	POOR
	P453	17.39	3.76	0.72	0.19	FAIR
	P466-2	10.80	5.00	1.99	0.40	POOR
DC 28	P522-1	58.52	4.19	1.03	0.25	FAIR
	P522-2	66.37	4.47	1.30	0.29	POOR
	D249	2.87	2.85	1.73	0.61	GOOD
	P106	13.12	2.67	1.03	0.39	GOOD
	P15-1	9.74	3.29	0.68	0.21	GOOD
	P16-1	10.00	4.92	1.35	0.27	POOR
	P166	4.20	3.43	0.68	0.20	GOOD
	P226	21.29	5.03	1.22	0.24	POOR
	P227	8.97	3.86	1.19	0.31	FAIR
	P2-3	42.61	2.34	0.82	0.35	GOOD
	P230	15.80	3.12	1.22	0.39	GOOD
	P231	3.89	1.78	0.49	0.27	GOOD
	P2-4	47.30	2.36	0.75	0.32	GOOD
	P243	2.04	2.51	1.44	0.57	GOOD
	P2-5	5.02	1.90	0.58	0.30	GOOD
	P253	9.11	3.88	1.31	0.34	FAIR



Report per Region per Cost Centre : Sorted by Road Number

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
	P260	3.44	3.04	1.17	0.39	GOOD
	P323	1.99	2.51	1.13	0.45	GOOD
	P326	9.57	4.85	1.67	0.34	POOR
	P343	2.31	3.12	1.01	0.32	GOOD
	P378	3.77	3.28	1.77	0.54	GOOD
	P389	12.02	3.96	1.76	0.44	FAIR
	P393	31.96	2.93	1.12	0.38	GOOD
	P425	14.43	2.82	0.96	0.34	GOOD
	P438	0.64	1.71	0.76	0.44	GOOD
	P456	2.55	2.87	1.38	0.48	GOOD
	P47-4	46.45	2.27	0.84	0.37	GOOD
	P47-5	21.14	2.15	0.80	0.37	GOOD
	P496	16.47	2.23	0.73	0.33	GOOD
	P50-1	26.32	3.22	0.98	0.30	GOOD
	P50-2	20.31	4.92	1.28	0.26	POOR
	P50-3	16.70	4.06	1.72	0.42	FAIR
	P508	3.95	4.11	1.40	0.34	FAIR
	P517	3.27	2.50	0.96	0.38	GOOD
	P524	3.28	4.56	1.22	0.27	POOR
	P535	4.72	1.84	0.74	0.40	GOOD
	P574	13.60	2.99	0.80	0.27	GOOD



Report per Region per Cost Centre : Sorted by Road Number

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 23	D117	1.97	3.99	1.25	0.31	FAIR
	D160	1.57	5.34	1.22	0.23	POOR
	D184	5.01	5.49	1.38	0.25	POOR
	D19	17.78	5.22	1.57	0.30	POOR
	D2101	10.71	3.24	1.49	0.46	GOOD
	D227	4.50	5.31	2.67	0.50	POOR
	D275	1.80	3.55	1.10	0.31	FAIR
	D475	1.35	4.81	2.04	0.42	POOR
	D822	3.85	3.04	0.90	0.30	GOOD
	P10-1	35.65	3.57	1.14	0.32	FAIR
	P10-2	15.26	3.11	0.77	0.25	GOOD
	P1-10	20.51	1.69	0.50	0.30	GOOD
	P11-1	45.86	2.19	0.59	0.27	GOOD
	P12-3	28.16	2.97	0.82	0.28	GOOD
	P13	24.55	2.75	0.76	0.28	GOOD
	P13	24.55	2.80	0.75	0.27	GOOD
	P170	2.46	2.74	1.21	0.44	GOOD
	P177	1.27	2.12	0.75	0.35	GOOD
	P180	9.70	2.85	0.59	0.21	GOOD
	P181	32.02	3.63	1.03	0.28	FAIR
	P187	15.72	4.53	1.35	0.30	POOR
	P189	22.30	1.78	28.88	16.24	GOOD
	P19	38.60	3.53	1.04	0.29	FAIR
	P1-9	34.09	1.94	0.70	0.36	GOOD
	P208	16.17	2.54	12.76	5.02	GOOD
	P212	33.74	3.63	1.46	0.40	FAIR
	P275	5.57	2.82	0.92	0.33	GOOD
	P280	3.20	5.67	1.62	0.29	POOR
	P28-1	43.15	3.36	1.00	0.30	GOOD
	P28-1	43.15	5.37	1.28	0.24	POOR
	P288	42.65	3.67	1.07	0.29	FAIR
	P29	31.31	3.46	1.20	0.35	GOOD
	P294	14.66	2.59	0.65	0.25	GOOD
	P294	14.66	4.24	1.34	0.32	POOR
	P30	46.55	1.92	0.49	0.25	GOOD
	P304	16.82	3.48	0.96	0.28	GOOD
	P304	16.82	3.52	1.07	0.30	FAIR
	P31	29.00	2.36	1.11	0.47	GOOD
	P319	2.50	2.66	1.05	0.40	GOOD
	P32	66.95	3.57	1.11	0.31	FAIR
	P32	66.95	2.24	0.87	0.39	GOOD
	P325	16.89	2.23	1.13	0.51	GOOD
	P331	21.00	5.37	2.33	0.43	POOR
	P333	7.50	3.12	1.03	0.33	GOOD
	P335	2.79	1.91	0.81	0.42	GOOD
	P340	41.35	2.77	0.77	0.28	GOOD
	P341	6.00	3.58	0.62	0.17	FAIR



Report per Region per Cost Centre : Sorted by Road Number

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 24	P349	26.34	4.88	1.38	0.28	POOR
	P359	12.49	3.75	1.03	0.27	FAIR
	P391	11.24	5.57	1.66	0.30	POOR
	P39-1	40.28	3.74	0.96	0.26	FAIR
	P394	23.57	3.49	0.99	0.28	GOOD
	P406	3.50	2.20	0.76	0.35	GOOD
	P519	3.74	3.24	1.01	0.31	GOOD
	P544	11.48	2.84	0.63	0.22	GOOD
	D1271	1.20	6.73	2.87	0.43	POOR
	D1272	1.50	5.64	1.80	0.32	POOR
	D276	1.00	4.40	2.05	0.47	POOR
	D348	3.80	4.02	1.01	0.25	FAIR
	D469	0.96	6.47	3.18	0.49	POOR
	D76	4.10	5.03	1.57	0.31	POOR
	P12-1	26.12	3.29	0.81	0.25	GOOD
	P14-2	51.34	2.88	0.96	0.33	GOOD
	P151	16.84	3.62	0.85	0.23	FAIR
	P160	15.44	3.38	1.10	0.33	GOOD
	P16-1	33.84	2.46	0.92	0.37	GOOD
	P192	15.00	3.28	1.41	0.43	GOOD
	P278	5.82	4.13	1.60	0.39	FAIR
	P291	38.05	2.58	0.65	0.25	GOOD
	P297	1.88	1.98	1.85	0.94	GOOD
	P305	7.23	3.89	1.36	0.35	FAIR
	P306	1.85	4.36	1.57	0.36	POOR
	P33-1	28.76	2.92	0.64	0.22	GOOD
	P33-2	19.72	2.70	1.39	0.51	GOOD
	P347	4.14	2.88	1.20	0.42	GOOD
	P356-1	3.63	3.21	0.70	0.22	GOOD
	P356-2	16.77	2.55	1.02	0.40	GOOD
	P36-1	45.34	2.66	0.96	0.36	GOOD
	P36-2	0.40	4.29	1.38	0.32	POOR
	P490	4.28	3.56	1.28	0.36	FAIR
	P614	3.29	2.52	0.75	0.30	GOOD
DC 25	P6-2	36.19	2.07	0.65	0.31	GOOD
	P6-3	46.25	3.50	1.08	0.31	GOOD
	P6-3	46.25	3.58	1.20	0.34	FAIR
	P6-4	34.96	3.98	1.38	0.35	FAIR
	P6-5	44.23	2.12	0.95	0.45	GOOD
	P186	2.71	3.10	0.78	0.25	GOOD
	P203	1.02	3.65	1.33	0.36	FAIR
	P204	9.79	2.94	1.14	0.39	GOOD
	P207	2.30	4.29	2.18	0.51	POOR
	P209	14.29	3.09	1.37	0.44	GOOD
	P210	8.29	2.86	1.06	0.37	GOOD
	P211	29.81	2.56	0.60	0.23	GOOD
	P241	1.70	2.07	1.02	0.49	GOOD



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	P272	51.29	2.66	1.16	0.44	GOOD
	P279	5.27	3.27	1.07	0.33	GOOD
	P296	5.00	3.85	1.00	0.26	FAIR
	P308	5.81	4.75	1.39	0.29	POOR
	P34-1	26.58	2.07	0.69	0.33	GOOD
	P34-2	47.35	1.77	0.59	0.33	GOOD
	P35-1	19.65	1.59	0.47	0.30	GOOD
	P35-2	14.28	2.58	1.08	0.42	GOOD
	P354	1.15	2.77	1.28	0.46	GOOD
	P37	35.33	2.69	1.09	0.41	GOOD
	P374	12.99	3.47	0.58	0.17	GOOD
	P38	14.06	3.37	0.91	0.27	GOOD
	P41	40.11	2.23	0.73	0.33	GOOD
	P420	8.96	3.70	0.81	0.22	FAIR
	P446	2.17	2.95	1.16	0.39	GOOD
	P483	42.01	2.58	0.91	0.35	GOOD
	P488	2.07	3.17	1.26	0.40	GOOD
	P565	7.29	4.88	2.01	0.41	POOR



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 22	D1110	0.53	5.94	2.81	0.47	POOR
	D1124	4.50	3.95	1.41	0.36	FAIR
	D1621	1.20	4.76	1.83	0.38	POOR
	D287	1.10	4.07	1.58	0.39	FAIR
	D457	6.00	4.58	1.18	0.26	POOR
	D487	2.02	3.72	1.27	0.34	FAIR
	D502	3.74	3.23	1.68	0.52	GOOD
	D546	0.45	3.32	1.43	0.43	GOOD
	D548	0.57	3.48	1.92	0.55	GOOD
	D587	0.51	4.51	2.72	0.60	POOR
	D62	1.10	3.44	1.27	0.37	GOOD
	P116	4.58	2.77	0.90	0.33	GOOD
	P117	8.08	4.08	1.21	0.30	FAIR
	P118	12.32	2.95	1.14	0.39	GOOD
	P121	9.61	3.13	0.57	0.18	GOOD
	P12-2	40.53	2.71	0.90	0.33	GOOD
	P127-1	14.60	3.84	1.14	0.30	FAIR
	P130	2.36	3.77	1.52	0.40	FAIR
	P130	2.36	3.84	1.07	0.28	FAIR
	P134	16.36	2.92	0.72	0.25	GOOD
	P135	31.35	3.02	0.62	0.20	GOOD
	P137	2.01	2.69	0.82	0.30	GOOD
	P139-1	6.24	3.78	1.36	0.36	FAIR
	P139-2	6.75	4.03	1.47	0.36	FAIR
	P1-4	4.52	3.46	1.25	0.36	GOOD
	P141	19.23	3.23	0.69	0.21	GOOD
	P14-1	16.49	2.63	0.79	0.30	GOOD
	P142	2.08	2.89	1.16	0.40	GOOD
	P147	8.04	3.82	0.87	0.23	FAIR
	P1-5	7.60	2.90	1.21	0.42	GOOD
	P154	10.62	3.50	1.35	0.39	GOOD
	P156-1	16.92	2.79	1.00	0.36	GOOD
	P156-2	8.10	2.54	0.71	0.28	GOOD
	P158	5.70	3.00	0.99	0.33	GOOD
	P159	9.40	2.94	0.92	0.31	GOOD
	P1-6	40.65	2.47	0.82	0.33	GOOD
	P163	10.39	3.85	0.63	0.16	FAIR
	P164	19.31	3.64	1.12	0.31	FAIR
	P165	15.40	3.73	1.23	0.33	FAIR
	P169	6.21	4.59	1.43	0.31	POOR
	P1-7	12.17	2.99	0.99	0.33	GOOD
	P172	10.10	3.43	0.93	0.27	GOOD
	P176	2.45	4.96	2.35	0.47	POOR
	P1-8	28.74	2.94	0.87	0.30	GOOD
	P1-8	28.74	3.27	1.02	0.31	GOOD
	P202	4.39	3.87	0.81	0.21	FAIR
	P21-1	36.12	2.00	0.65	0.32	GOOD



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	P21-1	36.12	2.16	0.68	0.32	GOOD
	P24	28.83	3.26	1.03	0.32	GOOD
	P25-1	27.71	2.54	0.74	0.29	GOOD
	P25-2	34.78	2.34	0.79	0.34	GOOD
	P26	3.95	4.11	1.27	0.31	FAIR
	P27-3	27.91	3.24	0.67	0.21	GOOD
	P292	3.41	3.37	0.92	0.27	GOOD
	P315	1.57	4.18	1.51	0.36	FAIR
	P334	4.10	4.00	1.10	0.28	FAIR
	P338	11.56	3.17	1.38	0.43	GOOD
	P342	7.87	3.10	1.15	0.37	GOOD
	P367	7.72	3.02	1.31	0.43	GOOD
	P369	2.65	2.06	1.27	0.62	GOOD
	P370	3.93	3.09	0.83	0.27	GOOD
	P371	2.44	2.59	0.73	0.28	GOOD
	P375	4.14	2.64	1.30	0.49	GOOD
	P384	2.03	4.44	1.93	0.43	POOR
	P399	13.20	3.06	1.38	0.45	GOOD
	P418	3.10	2.43	0.74	0.30	GOOD
	P423	45.33	4.52	1.49	0.33	POOR
	P424	1.37	2.06	0.79	0.38	GOOD
	P430	4.36	3.87	1.47	0.38	FAIR
	P469	8.71	1.99	0.66	0.33	GOOD
	P471	3.35	3.32	0.92	0.28	GOOD
	P477	6.42	3.26	0.97	0.30	GOOD
	P478	4.71	3.44	1.02	0.30	GOOD
	P479	7.56	3.05	1.08	0.35	GOOD
	P480	2.77	2.54	0.61	0.24	GOOD
	P481	0.90	3.82	2.24	0.59	FAIR
	P489	2.58	4.45	1.81	0.41	POOR
	P500	1.23	2.78	1.15	0.41	GOOD
	P502	16.59	3.91	1.07	0.27	FAIR
	P503	8.17	4.26	1.33	0.31	POOR
	P513	1.23	6.23	1.87	0.30	POOR
	P526	3.23	2.32	0.58	0.25	GOOD
	P5-3	18.34	2.83	1.10	0.39	GOOD
	P536	0.36	3.26	1.54	0.47	GOOD
	P5-4	29.74	1.83	0.42	0.23	GOOD
	P575	5.94	3.46	1.22	0.35	GOOD
	P6-1	27.16	2.06	0.61	0.30	GOOD
	P63	24.69	2.27	0.69	0.30	GOOD
	P65	3.06	3.07	1.44	0.47	GOOD
	P70	8.47	3.78	0.87	0.23	FAIR
	P7-1	0.18	2.32	0.63	0.27	GOOD
	P7-1	5.78	2.32	0.63	0.27	GOOD
	P8-1	14.65	3.29	0.76	0.23	GOOD
	P9	8.50	3.25	0.92	0.28	GOOD



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 43	D25	0.92	4.78	1.82	0.38	POOR
	D623	0.70	4.79	2.21	0.46	POOR
	D637	0.56	4.65	2.43	0.52	POOR
	D731	0.92	5.77	2.86	0.50	POOR
	P122	5.91	3.38	1.07	0.32	GOOD
	P126	8.67	3.48	1.06	0.30	GOOD
	P23-1	49.51	3.15	0.73	0.23	GOOD
	P23-2	3.61	3.44	0.98	0.28	GOOD
	P246	9.16	2.74	0.54	0.20	GOOD
	P27-2	0.77	3.18	1.73	0.54	GOOD
	P299	1.61	2.92	1.22	0.42	GOOD
	P316-1	28.03	2.24	0.60	0.27	GOOD
	P316-2	9.78	1.78	0.51	0.29	GOOD
	P317	0.10	5.17	1.73	0.33	POOR
	P408	3.27	3.85	1.29	0.33	FAIR
	P5-1	21.66	2.48	0.71	0.29	GOOD
	P5-2	27.09	2.49	0.90	0.36	GOOD
	P601	36.38	2.11	1.13	0.54	GOOD
	P603	42.79	2.40	0.85	0.35	GOOD
	P604	0.70	2.91	1.46	0.50	GOOD
	P608	2.42	5.46	1.92	0.35	POOR
	P609	76.29	2.37	0.97	0.41	GOOD
	P611	1.38	3.83	1.59	0.42	FAIR
	P612	6.43	3.18	1.04	0.33	GOOD
	P68-1	14.93	2.92	0.77	0.26	GOOD
	P7-2	45.65	2.15	0.64	0.30	GOOD
	P73	10.47	3.80	0.77	0.20	FAIR
	P7-3	26.16	2.75	0.70	0.25	GOOD
	P7-4	38.23	2.98	0.79	0.27	GOOD
	P77	15.14	3.80	1.12	0.29	FAIR
	P8-3	4.20	4.73	1.60	0.34	POOR



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 21	D180	1.20	4.79	1.78	0.37	POOR
	D202	3.64	3.49	1.14	0.33	GOOD
	D440	2.00	5.54	2.37	0.43	POOR
	D460	0.55	5.10	2.68	0.52	POOR
	D480	0.55	5.97	2.87	0.48	POOR
	D691	2.76	5.53	2.27	0.41	POOR
	D954	0.78	4.11	1.32	0.32	FAIR
	P188	5.04	2.98	0.80	0.27	GOOD
	P196	2.18	3.15	1.05	0.33	GOOD
	P197-3	47.08	3.38	1.71	0.51	GOOD
	P198	7.47	3.23	1.22	0.38	GOOD
	P200	22.54	3.89	1.38	0.35	FAIR
	P22-1	36.38	2.09	0.68	0.33	GOOD
	P22-2	51.73	2.46	0.89	0.36	GOOD
	P262	22.74	2.60	0.95	0.37	GOOD
	P285	1.70	3.73	1.38	0.37	FAIR
	P286	7.59	2.17	20.66	9.50	GOOD
	P3-1	78.37	2.88	1.18	0.41	GOOD
	P310	3.21	4.05	1.17	0.29	FAIR
	P344	2.08	1.57	0.70	0.45	GOOD
	P345	8.92	5.24	1.85	0.35	POOR
	P351	1.05	1.91	0.86	0.45	GOOD
	P383	0.25	2.40	1.10	0.46	GOOD
	P395	24.38	3.25	1.07	0.33	GOOD
	P416	1.19	1.59	0.76	0.48	GOOD
	P417	2.90	4.38	1.34	0.31	POOR
	P464	8.01	3.37	1.60	0.47	GOOD
	P482	1.47	4.31	1.32	0.31	POOR
	P520	1.40	3.24	1.08	0.33	GOOD
	P520	0.69	3.24	1.08	0.33	GOOD
	P540	2.80	2.55	0.76	0.30	GOOD
	P55	4.26	3.29	0.87	0.26	GOOD
	P55	4.26	3.41	1.17	0.34	GOOD
	P56	0.99	3.11	1.64	0.53	GOOD
	P560	4.02	2.67	0.72	0.27	GOOD
	P58	1.99	3.45	0.84	0.24	GOOD
	P58	1.99	4.45	1.59	0.36	POOR
	P580	0.54	3.69	1.90	0.51	FAIR
	P59	15.45	3.87	1.49	0.39	FAIR
	P61	25.19	3.65	0.88	0.24	FAIR
	P68-2	16.06	3.05	1.06	0.35	GOOD
	P69	1.94	3.74	1.06	0.28	FAIR
	P71	2.48	3.25	1.71	0.53	GOOD
	P72	2.37	3.26	1.82	0.56	GOOD
	P74	4.06	3.37	1.29	0.38	GOOD
	P75-1	3.84	2.77	1.63	0.59	GOOD
	P75-2	5.49	3.65	1.59	0.44	FAIR



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 29	D1524	4.40	3.96	0.95	0.24	FAIR
	D1637	1.10	4.67	1.93	0.41	POOR
	D382	5.35	3.36	0.85	0.25	GOOD
	D739	0.90	3.33	2.31	0.69	GOOD
	D892	2.01	2.62	1.23	0.47	GOOD
	D893	2.41	2.28	1.09	0.48	GOOD
	D894	6.91	3.65	1.04	0.28	FAIR
	P103-1	13.60	3.37	1.20	0.36	GOOD
	P103-2	12.22	3.54	0.79	0.22	FAIR
	P104	20.56	2.77	0.97	0.35	GOOD
	P104	20.56	3.42	1.27	0.37	GOOD
	P105	5.42	2.60	0.72	0.28	GOOD
	P107	15.75	4.12	1.26	0.31	FAIR
	P109	12.12	2.67	0.93	0.35	GOOD
	P110	31.71	2.94	0.79	0.27	GOOD
	P20-1	37.87	2.37	0.81	0.34	GOOD
	P20-2	33.06	2.37	0.81	0.34	GOOD
	P25-3	46.16	3.06	0.96	0.31	GOOD
	P261	1.10	5.76	2.54	0.44	POOR
	P266	13.54	2.84	1.07	0.38	GOOD
	P330	3.21	3.93	1.67	0.42	FAIR
	P339	3.64	3.40	1.26	0.37	GOOD
	P353	6.63	2.90	0.96	0.33	GOOD
	P387	10.37	3.45	0.86	0.25	GOOD
	P398-2	15.90	2.21	0.66	0.30	GOOD
	P403	6.58	3.29	1.07	0.33	GOOD
	P415	12.62	2.45	1.37	0.56	GOOD
	P428	0.78	2.99	1.52	0.51	GOOD
	P445	3.22	3.67	1.51	0.41	FAIR
	P459	11.85	3.33	1.36	0.41	GOOD
	P467	8.66	3.71	1.23	0.33	FAIR
	P474	2.49	5.04	1.61	0.32	POOR
	P47-6	5.83	1.95	0.62	0.32	GOOD
	P492	4.74	3.10	0.94	0.30	GOOD
	P521	7.63	3.34	1.78	0.53	GOOD
	P710	8.10	4.12	1.51	0.37	FAIR
	P711	5.32	2.60	0.59	0.23	GOOD
	P711	5.32	3.54	1.64	0.46	FAIR
Durban	D1002	6.34	3.71	1.90	0.51	FAIR
	D1003	6.05	1.76	0.61	0.35	GOOD
	D1004	12.91	3.75	1.62	0.43	FAIR
	D1028	0.30	3.84	1.83	0.48	FAIR
	D140	0.59	3.17	1.60	0.51	GOOD
	D210	7.90	2.99	1.22	0.41	GOOD
	D435	1.14	4.17	2.40	0.58	FAIR
	D499	0.95	5.15	2.13	0.41	POOR
	D520	0.66	5.82	2.45	0.42	POOR



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	D521	6.50	4.98	1.39	0.28	POOR
	D728	0.40	2.32	0.97	0.42	GOOD
	D766	0.47	2.64	1.04	0.39	GOOD
	D791	0.52	3.35	1.91	0.57	GOOD
	D828	2.19	1.98	0.68	0.34	GOOD
	D995	5.45	2.34	1.20	0.51	GOOD
	P100	15.80	2.66	0.99	0.37	GOOD
	P100	15.80	4.70	1.06	0.23	POOR
	P1-1	21.45	2.01	0.53	0.26	GOOD
	P119	1.20	3.94	2.51	0.64	FAIR
	P1-2	13.75	3.58	1.87	0.52	FAIR
	P1-3	24.20	2.75	1.23	0.45	GOOD
	P138	5.53	5.00	1.62	0.32	POOR
	P152	4.98	2.63	0.81	0.31	GOOD
	P197-1	10.94	3.13	1.43	0.46	GOOD
	P197-1	1.19	3.13	1.43	0.46	GOOD
	P2-1	1.09	2.60	1.08	0.42	GOOD
	P2-1	6.54	2.60	1.08	0.42	GOOD
	P2-1	7.17	2.60	1.08	0.42	GOOD
	P2-1	1.09	2.60	1.08	0.42	GOOD
	P21-2	30.01	2.26	0.67	0.30	GOOD
	P2-2	49.75	2.33	1.00	0.43	GOOD
	P2-2	49.75	2.43	1.19	0.49	GOOD
	P239	4.07	5.79	1.65	0.28	POOR
	P242	9.95	3.34	1.18	0.35	GOOD
	P245	7.37	2.65	0.92	0.35	GOOD
	P255	15.79	2.95	1.82	0.62	GOOD
	P256	1.23	2.59	1.02	0.39	GOOD
	P259	5.19	1.69	0.50	0.30	GOOD
	P259	5.19	3.22	1.17	0.36	GOOD
	P3-2	11.58	2.84	0.98	0.34	GOOD
	P324	0.52	2.50	1.58	0.63	GOOD
	P385	17.26	2.24	0.85	0.38	GOOD
	P398-1	3.37	2.19	0.74	0.34	GOOD
	P398-1	2.50	2.19	0.74	0.34	GOOD
	P398-1	8.52	2.19	0.74	0.34	GOOD
	P400	6.20	2.46	0.72	0.29	GOOD
	P400	6.20	2.46	0.72	0.29	GOOD
	P426	6.26	2.42	0.72	0.30	GOOD
	P448	11.91	2.01	0.74	0.37	GOOD
	P448	0.62	2.01	0.74	0.37	GOOD
	P448	11.91	2.98	1.52	0.51	GOOD
	P448	0.62	2.98	1.52	0.51	GOOD
	P448	11.91	2.98	1.52	0.51	GOOD
	P454	12.76	2.50	1.38	0.55	GOOD
	P455	5.64	1.92	0.77	0.40	GOOD
	P457	2.14	4.21	1.84	0.44	POOR



Report per Region per Cost Centre : Sorted by Road Number

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
	P461	5.70	2.93	1.07	0.36	GOOD
	P504	2.92	3.53	1.57	0.44	FAIR
	P506	1.45	2.71	0.97	0.36	GOOD
	P528	11.55	2.06	0.72	0.35	GOOD
	P529	3.58	4.32	8.75	2.03	POOR
	P530-1	1.25	4.65	1.85	0.40	POOR
	P530-2	3.12	5.15	1.76	0.34	POOR
	P541	0.21	2.37	1.10	0.46	GOOD
	P551	5.74	4.56	1.51	0.33	POOR
	P556	1.53	2.96	0.98	0.33	GOOD
	P559	7.61	3.45	1.61	0.47	GOOD
	P578	1.78	3.16	1.13	0.36	GOOD
	P585	2.01	2.78	1.34	0.48	GOOD
	P725	10.20	1.97	1.00	0.51	GOOD
	P76	0.82	3.12	1.66	0.53	GOOD
	P78	3.80	3.07	0.91	0.30	GOOD
	P79	14.13	3.33	1.56	0.47	GOOD
	P80	14.20	2.41	2.29	0.95	GOOD
	P82	12.73	2.22	1.08	0.49	GOOD
	P82	12.73	2.22	1.08	0.49	GOOD
	P85	0.51	2.42	0.95	0.39	GOOD
	P85	11.00	2.42	0.95	0.39	GOOD
	P88	4.36	3.35	1.21	0.36	GOOD
	P93	26.90	2.37	0.81	0.34	GOOD
	P93	7.29	2.37	0.81	0.34	GOOD
	P93	7.29	2.47	1.12	0.45	GOOD
	P93	26.90	2.47	1.12	0.45	GOOD
	P94	3.22	2.06	0.59	0.29	GOOD
	P94	3.13	2.06	0.59	0.29	GOOD
	P96	8.29	2.02	0.82	0.41	GOOD
	P97	1.54	5.10	2.75	0.54	POOR
	P98	9.40	3.13	1.13	0.36	GOOD
	P99	0.49	4.12	1.84	0.45	FAIR

APPENDIX B

IRI Sorted by Roughness



Report per Region per Cost Centre : Sorted by Roughness

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 26	P47-1	33.12	1.53	0.52	0.34	GOOD
	P47-2	37.91	1.73	0.36	0.21	GOOD
	P432	1.22	1.87	0.66	0.35	GOOD
	P434	2.88	2.01	0.61	0.30	GOOD
	P34-3	30.77	2.03	1.17	0.58	GOOD
	P47-3	56.67	2.13	0.69	0.32	GOOD
	P289	6.02	2.34	0.81	0.35	GOOD
	P313	8.60	2.37	1.11	0.47	GOOD
	P309-2	13.90	2.45	0.59	0.24	GOOD
	P404	48.47	2.48	0.90	0.36	GOOD
	P523	12.28	2.53	1.68	0.66	GOOD
	P221	14.21	2.55	0.64	0.25	GOOD
	P46-1	18.22	2.62	0.73	0.28	GOOD
	P46-3	33.81	2.66	0.55	0.21	GOOD
	P34-5	16.94	2.67	0.89	0.33	GOOD
	P46-2	45.13	2.69	0.90	0.33	GOOD
	P49-1	53.92	2.69	0.74	0.28	GOOD
	P309-1	6.93	2.70	0.88	0.33	GOOD
	P303	0.70	2.73	1.20	0.44	GOOD
	D268	1.38	2.75	0.91	0.33	GOOD
	P271	12.70	2.76	0.95	0.34	GOOD
	D872	1.08	2.87	1.39	0.48	GOOD
	P46-2	45.13	2.87	0.97	0.34	GOOD
	D1931	0.71	2.91	1.29	0.44	GOOD
	P34-4	26.19	2.91	0.95	0.33	GOOD
	P40	25.27	3.07	1.24	0.40	GOOD
	P52-1	25.66	3.09	0.98	0.32	GOOD
	P268	10.27	3.10	1.80	0.58	GOOD
	P46-4	7.77	3.11	0.96	0.31	GOOD
	P720	9.72	3.13	0.99	0.32	GOOD
	P433	8.57	3.17	1.26	0.40	GOOD
	D1721	3.45	3.18	1.16	0.36	GOOD
	P54	38.95	3.22	1.04	0.32	GOOD
	P463	17.66	3.24	1.19	0.37	GOOD
	P52-3	34.58	3.24	1.00	0.31	GOOD
	P52-2	54.21	3.27	1.18	0.36	GOOD
	P51	4.26	3.32	1.03	0.31	GOOD
	P301	16.97	3.38	1.34	0.40	GOOD
	P433	8.57	3.44	1.34	0.39	GOOD
	P258	5.30	3.45	1.27	0.37	GOOD
	P45	0.93	3.53	1.65	0.47	FAIR
	P236	7.50	3.57	1.43	0.40	FAIR



Report per Region per Cost Centre : Sorted by Roughness

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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 27	P702	4.78	3.60	1.30	0.36	FAIR
	P244-1	3.18	3.66	1.14	0.31	FAIR
	P48	70.49	3.68	1.08	0.29	FAIR
	P700	1.43	3.88	0.85	0.22	FAIR
	D1935	1.22	4.03	2.24	0.56	FAIR
	P16-4	2.10	4.10	1.94	0.47	FAIR
	P287	4.50	4.33	1.79	0.41	POOR
	D427	3.51	4.35	1.25	0.29	POOR
	P234	13.94	4.43	1.48	0.33	POOR
	P498	0.70	4.70	1.95	0.41	POOR
	P40	25.27	4.73	1.92	0.41	POOR
	P49-2	4.60	4.80	2.26	0.47	POOR
	P410	2.19	2.52	0.64	0.25	GOOD
	P414	10.62	2.90	0.82	0.28	GOOD
	P235-1	29.00	3.39	1.25	0.37	GOOD
	P2-9	1.36	3.42	1.52	0.44	GOOD
	D127	1.31	3.52	1.44	0.41	FAIR
	P397	10.08	3.52	0.91	0.26	FAIR
	P453	17.39	3.76	0.72	0.19	FAIR
	P2-6	2.33	3.84	1.69	0.44	FAIR
	P38	12.00	3.84	1.28	0.33	FAIR
	P237	28.98	3.89	0.98	0.25	FAIR
	P522-1	58.52	4.19	1.03	0.25	FAIR
	P522-2	66.37	4.47	1.30	0.29	POOR
	P396	2.00	4.51	2.69	0.60	POOR
	P466-2	10.80	5.00	1.99	0.40	POOR
	P449	2.60	5.55	1.97	0.35	POOR
	P443	21.88	6.15	1.60	0.26	POOR
DC 28	P438	0.64	1.71	0.76	0.44	GOOD
	P231	3.89	1.78	0.49	0.27	GOOD
	P535	4.72	1.84	0.74	0.40	GOOD
	P2-5	5.02	1.90	0.58	0.30	GOOD
	P47-5	21.14	2.15	0.80	0.37	GOOD
	P496	16.47	2.23	0.73	0.33	GOOD
	P47-4	46.45	2.27	0.84	0.37	GOOD
	P2-3	42.61	2.34	0.82	0.35	GOOD
	P2-4	47.30	2.36	0.75	0.32	GOOD
	P517	3.27	2.50	0.96	0.38	GOOD
	P243	2.04	2.51	1.44	0.57	GOOD
	P323	1.99	2.51	1.13	0.45	GOOD
	P106	13.12	2.67	1.03	0.39	GOOD
	P425	14.43	2.82	0.96	0.34	GOOD



Report per Region per Cost Centre : Sorted by Roughness

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
	D249	2.87	2.85	1.73	0.61	GOOD
	P456	2.55	2.87	1.38	0.48	GOOD
	P393	31.96	2.93	1.12	0.38	GOOD
	P574	13.60	2.99	0.80	0.27	GOOD
	P260	3.44	3.04	1.17	0.39	GOOD
	P230	15.80	3.12	1.22	0.39	GOOD
	P343	2.31	3.12	1.01	0.32	GOOD
	P50-1	26.32	3.22	0.98	0.30	GOOD
	P378	3.77	3.28	1.77	0.54	GOOD
	P15-1	9.74	3.29	0.68	0.21	GOOD
	P166	4.20	3.43	0.68	0.20	GOOD
	P227	8.97	3.86	1.19	0.31	FAIR
	P253	9.11	3.88	1.31	0.34	FAIR
	P389	12.02	3.96	1.76	0.44	FAIR
	P50-3	16.70	4.06	1.72	0.42	FAIR
	P508	3.95	4.11	1.40	0.34	FAIR
	P524	3.28	4.56	1.22	0.27	POOR
	P326	9.57	4.85	1.67	0.34	POOR
	P16-1	10.00	4.92	1.35	0.27	POOR
	P50-2	20.31	4.92	1.28	0.26	POOR
	P226	21.29	5.03	1.22	0.24	POOR



Report per Region per Cost Centre : Sorted by Roughness

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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 23	P1-10	20.51	1.69	0.50	0.30	GOOD
	P189	22.30	1.78	28.88	16.24	GOOD
	P335	2.79	1.91	0.81	0.42	GOOD
	P30	46.55	1.92	0.49	0.25	GOOD
	P1-9	34.09	1.94	0.70	0.36	GOOD
	P177	1.27	2.12	0.75	0.35	GOOD
	P11-1	45.86	2.19	0.59	0.27	GOOD
	P406	3.50	2.20	0.76	0.35	GOOD
	P325	16.89	2.23	1.13	0.51	GOOD
	P32	66.95	2.24	0.87	0.39	GOOD
	P31	29.00	2.36	1.11	0.47	GOOD
	P208	16.17	2.54	12.76	5.02	GOOD
	P294	14.66	2.59	0.65	0.25	GOOD
	P319	2.50	2.66	1.05	0.40	GOOD
	P170	2.46	2.74	1.21	0.44	GOOD
	P13	24.55	2.75	0.76	0.28	GOOD
	P340	41.35	2.77	0.77	0.28	GOOD
	P13	24.55	2.80	0.75	0.27	GOOD
	P275	5.57	2.82	0.92	0.33	GOOD
	P544	11.48	2.84	0.63	0.22	GOOD
	P180	9.70	2.85	0.59	0.21	GOOD
	P12-3	28.16	2.97	0.82	0.28	GOOD
	D822	3.85	3.04	0.90	0.30	GOOD
	P10-2	15.26	3.11	0.77	0.25	GOOD
	P333	7.50	3.12	1.03	0.33	GOOD
	D2101	10.71	3.24	1.49	0.46	GOOD
	P519	3.74	3.24	1.01	0.31	GOOD
	P28-1	43.15	3.36	1.00	0.30	GOOD
	P29	31.31	3.46	1.20	0.35	GOOD
	P304	16.82	3.48	0.96	0.28	GOOD
	P394	23.57	3.49	0.99	0.28	GOOD
	P304	16.82	3.52	1.07	0.30	FAIR
	P19	38.60	3.53	1.04	0.29	FAIR
	D275	1.80	3.55	1.10	0.31	FAIR
	P10-1	35.65	3.57	1.14	0.32	FAIR
	P32	66.95	3.57	1.11	0.31	FAIR
	P341	6.00	3.58	0.62	0.17	FAIR
	P181	32.02	3.63	1.03	0.28	FAIR
	P212	33.74	3.63	1.46	0.40	FAIR
	P288	42.65	3.67	1.07	0.29	FAIR
	P39-1	40.28	3.74	0.96	0.26	FAIR
	P359	12.49	3.75	1.03	0.27	FAIR
	D117	1.97	3.99	1.25	0.31	FAIR
	P294	14.66	4.24	1.34	0.32	POOR
	P187	15.72	4.53	1.35	0.30	POOR
	D475	1.35	4.81	2.04	0.42	POOR
	P349	26.34	4.88	1.38	0.28	POOR



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 24	D19	17.78	5.22	1.57	0.30	POOR
	D227	4.50	5.31	2.67	0.50	POOR
	D160	1.57	5.34	1.22	0.23	POOR
	P28-1	43.15	5.37	1.28	0.24	POOR
	P331	21.00	5.37	2.33	0.43	POOR
	D184	5.01	5.49	1.38	0.25	POOR
	P391	11.24	5.57	1.66	0.30	POOR
	P280	3.20	5.67	1.62	0.29	POOR
	P297	1.88	1.98	1.85	0.94	GOOD
	P6-2	36.19	2.07	0.65	0.31	GOOD
	P6-5	44.23	2.12	0.95	0.45	GOOD
	P16-1	33.84	2.46	0.92	0.37	GOOD
	P614	3.29	2.52	0.75	0.30	GOOD
	P356-2	16.77	2.55	1.02	0.40	GOOD
	P291	38.05	2.58	0.65	0.25	GOOD
	P36-1	45.34	2.66	0.96	0.36	GOOD
	P33-2	19.72	2.70	1.39	0.51	GOOD
	P14-2	51.34	2.88	0.96	0.33	GOOD
	P347	4.14	2.88	1.20	0.42	GOOD
	P33-1	28.76	2.92	0.64	0.22	GOOD
	P356-1	3.63	3.21	0.70	0.22	GOOD
	P192	15.00	3.28	1.41	0.43	GOOD
	P12-1	26.12	3.29	0.81	0.25	GOOD
	P160	15.44	3.38	1.10	0.33	GOOD
	P6-3	46.25	3.50	1.08	0.31	GOOD
	P490	4.28	3.56	1.28	0.36	FAIR
	P6-3	46.25	3.58	1.20	0.34	FAIR
	P151	16.84	3.62	0.85	0.23	FAIR
	P305	7.23	3.89	1.36	0.35	FAIR
	P6-4	34.96	3.98	1.38	0.35	FAIR
	D348	3.80	4.02	1.01	0.25	FAIR
	P278	5.82	4.13	1.60	0.39	FAIR
	P36-2	0.40	4.29	1.38	0.32	POOR
	P306	1.85	4.36	1.57	0.36	POOR
	D276	1.00	4.40	2.05	0.47	POOR
	D76	4.10	5.03	1.57	0.31	POOR
	D1272	1.50	5.64	1.80	0.32	POOR
	D469	0.96	6.47	3.18	0.49	POOR
	D1271	1.20	6.73	2.87	0.43	POOR
DC 25	P35-1	19.65	1.59	0.47	0.30	GOOD
	P34-2	47.35	1.77	0.59	0.33	GOOD
	P241	1.70	2.07	1.02	0.49	GOOD
	P34-1	26.58	2.07	0.69	0.33	GOOD
	P41	40.11	2.23	0.73	0.33	GOOD
	P211	29.81	2.56	0.60	0.23	GOOD
	P35-2	14.28	2.58	1.08	0.42	GOOD
	P483	42.01	2.58	0.91	0.35	GOOD



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Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
	P272	51.29	2.66	1.16	0.44	GOOD
	P37	35.33	2.69	1.09	0.41	GOOD
	P354	1.15	2.77	1.28	0.46	GOOD
	P210	8.29	2.86	1.06	0.37	GOOD
	P204	9.79	2.94	1.14	0.39	GOOD
	P446	2.17	2.95	1.16	0.39	GOOD
	P209	14.29	3.09	1.37	0.44	GOOD
	P186	2.71	3.10	0.78	0.25	GOOD
	P488	2.07	3.17	1.26	0.40	GOOD
	P279	5.27	3.27	1.07	0.33	GOOD
	P38	14.06	3.37	0.91	0.27	GOOD
	P374	12.99	3.47	0.58	0.17	GOOD
	P203	1.02	3.65	1.33	0.36	FAIR
	P420	8.96	3.70	0.81	0.22	FAIR
	P296	5.00	3.85	1.00	0.26	FAIR
	P207	2.30	4.29	2.18	0.51	POOR
	P308	5.81	4.75	1.39	0.29	POOR
	P565	7.29	4.88	2.01	0.41	POOR



Report per Region per Cost Centre : Sorted by Roughness

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 22	P5-4	29.74	1.83	0.42	0.23	GOOD
	P469	8.71	1.99	0.66	0.33	GOOD
	P21-1	36.12	2.00	0.65	0.32	GOOD
	P369	2.65	2.06	1.27	0.62	GOOD
	P424	1.37	2.06	0.79	0.38	GOOD
	P6-1	27.16	2.06	0.61	0.30	GOOD
	P21-1	36.12	2.16	0.68	0.32	GOOD
	P63	24.69	2.27	0.69	0.30	GOOD
	P526	3.23	2.32	0.58	0.25	GOOD
	P7-1	0.18	2.32	0.63	0.27	GOOD
	P7-1	5.78	2.32	0.63	0.27	GOOD
	P25-2	34.78	2.34	0.79	0.34	GOOD
	P418	3.10	2.43	0.74	0.30	GOOD
	P1-6	40.65	2.47	0.82	0.33	GOOD
	P156-2	8.10	2.54	0.71	0.28	GOOD
	P25-1	27.71	2.54	0.74	0.29	GOOD
	P480	2.77	2.54	0.61	0.24	GOOD
	P371	2.44	2.59	0.73	0.28	GOOD
	P14-1	16.49	2.63	0.79	0.30	GOOD
	P375	4.14	2.64	1.30	0.49	GOOD
	P137	2.01	2.69	0.82	0.30	GOOD
	P12-2	40.53	2.71	0.90	0.33	GOOD
	P116	4.58	2.77	0.90	0.33	GOOD
	P500	1.23	2.78	1.15	0.41	GOOD
	P156-1	16.92	2.79	1.00	0.36	GOOD
	P5-3	18.34	2.83	1.10	0.39	GOOD
	P142	2.08	2.89	1.16	0.40	GOOD
	P1-5	7.60	2.90	1.21	0.42	GOOD
	P134	16.36	2.92	0.72	0.25	GOOD
	P159	9.40	2.94	0.92	0.31	GOOD
	P1-8	28.74	2.94	0.87	0.30	GOOD
	P118	12.32	2.95	1.14	0.39	GOOD
	P1-7	12.17	2.99	0.99	0.33	GOOD
	P158	5.70	3.00	0.99	0.33	GOOD
	P135	31.35	3.02	0.62	0.20	GOOD
	P367	7.72	3.02	1.31	0.43	GOOD
	P479	7.56	3.05	1.08	0.35	GOOD
	P399	13.20	3.06	1.38	0.45	GOOD
	P65	3.06	3.07	1.44	0.47	GOOD
	P370	3.93	3.09	0.83	0.27	GOOD
	P342	7.87	3.10	1.15	0.37	GOOD
	P121	9.61	3.13	0.57	0.18	GOOD
	P338	11.56	3.17	1.38	0.43	GOOD
	D502	3.74	3.23	1.68	0.52	GOOD
	P141	19.23	3.23	0.69	0.21	GOOD
	P27-3	27.91	3.24	0.67	0.21	GOOD
	P9	8.50	3.25	0.92	0.28	GOOD



Report per Region per Cost Centre : Sorted by Roughness

Measurement Year - 2007

District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
	P24	28.83	3.26	1.03	0.32	GOOD
	P477	6.42	3.26	0.97	0.30	GOOD
	P536	0.36	3.26	1.54	0.47	GOOD
	P1-8	28.74	3.27	1.02	0.31	GOOD
	P8-1	14.65	3.29	0.76	0.23	GOOD
	D546	0.45	3.32	1.43	0.43	GOOD
	P471	3.35	3.32	0.92	0.28	GOOD
	P292	3.41	3.37	0.92	0.27	GOOD
	P172	10.10	3.43	0.93	0.27	GOOD
	D62	1.10	3.44	1.27	0.37	GOOD
	P478	4.71	3.44	1.02	0.30	GOOD
	P1-4	4.52	3.46	1.25	0.36	GOOD
	P575	5.94	3.46	1.22	0.35	GOOD
	D548	0.57	3.48	1.92	0.55	GOOD
	P154	10.62	3.50	1.35	0.39	GOOD
	P164	19.31	3.64	1.12	0.31	FAIR
	D487	2.02	3.72	1.27	0.34	FAIR
	P165	15.40	3.73	1.23	0.33	FAIR
	P130	2.36	3.77	1.52	0.40	FAIR
	P139-1	6.24	3.78	1.36	0.36	FAIR
	P70	8.47	3.78	0.87	0.23	FAIR
	P147	8.04	3.82	0.87	0.23	FAIR
	P481	0.90	3.82	2.24	0.59	FAIR
	P127-1	14.60	3.84	1.14	0.30	FAIR
	P130	2.36	3.84	1.07	0.28	FAIR
	P163	10.39	3.85	0.63	0.16	FAIR
	P202	4.39	3.87	0.81	0.21	FAIR
	P430	4.36	3.87	1.47	0.38	FAIR
	P502	16.59	3.91	1.07	0.27	FAIR
	D1124	4.50	3.95	1.41	0.36	FAIR
	P334	4.10	4.00	1.10	0.28	FAIR
	P139-2	6.75	4.03	1.47	0.36	FAIR
	D287	1.10	4.07	1.58	0.39	FAIR
	P117	8.08	4.08	1.21	0.30	FAIR
	P26	3.95	4.11	1.27	0.31	FAIR
	P315	1.57	4.18	1.51	0.36	FAIR
	P503	8.17	4.26	1.33	0.31	POOR
	P384	2.03	4.44	1.93	0.43	POOR
	P489	2.58	4.45	1.81	0.41	POOR
	D587	0.51	4.51	2.72	0.60	POOR
	P423	45.33	4.52	1.49	0.33	POOR
	D457	6.00	4.58	1.18	0.26	POOR
	P169	6.21	4.59	1.43	0.31	POOR
	D1621	1.20	4.76	1.83	0.38	POOR
	P176	2.45	4.96	2.35	0.47	POOR
	D1110	0.53	5.94	2.81	0.47	POOR
	P513	1.23	6.23	1.87	0.30	POOR



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DC 43	P316-2	9.78	1.78	0.51	0.29	GOOD
	P601	36.38	2.11	1.13	0.54	GOOD
	P7-2	45.65	2.15	0.64	0.30	GOOD
	P316-1	28.03	2.24	0.60	0.27	GOOD
	P609	76.29	2.37	0.97	0.41	GOOD
	P603	42.79	2.40	0.85	0.35	GOOD
	P5-1	21.66	2.48	0.71	0.29	GOOD
	P5-2	27.09	2.49	0.90	0.36	GOOD
	P246	9.16	2.74	0.54	0.20	GOOD
	P7-3	26.16	2.75	0.70	0.25	GOOD
	P604	0.70	2.91	1.46	0.50	GOOD
	P299	1.61	2.92	1.22	0.42	GOOD
	P68-1	14.93	2.92	0.77	0.26	GOOD
	P7-4	38.23	2.98	0.79	0.27	GOOD
	P23-1	49.51	3.15	0.73	0.23	GOOD
	P27-2	0.77	3.18	1.73	0.54	GOOD
	P612	6.43	3.18	1.04	0.33	GOOD
	P122	5.91	3.38	1.07	0.32	GOOD
	P23-2	3.61	3.44	0.98	0.28	GOOD
	P126	8.67	3.48	1.06	0.30	GOOD
	P73	10.47	3.80	0.77	0.20	FAIR
	P77	15.14	3.80	1.12	0.29	FAIR
	P611	1.38	3.83	1.59	0.42	FAIR
	P408	3.27	3.85	1.29	0.33	FAIR
	D637	0.56	4.65	2.43	0.52	POOR
	P8-3	4.20	4.73	1.60	0.34	POOR
	D25	0.92	4.78	1.82	0.38	POOR
	D623	0.70	4.79	2.21	0.46	POOR
	P317	0.10	5.17	1.73	0.33	POOR
	P608	2.42	5.46	1.92	0.35	POOR
	D731	0.92	5.77	2.86	0.50	POOR



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
DC 21	P344	2.08	1.57	0.70	0.45	GOOD
	P416	1.19	1.59	0.76	0.48	GOOD
	P351	1.05	1.91	0.86	0.45	GOOD
	P22-1	36.38	2.09	0.68	0.33	GOOD
	P286	7.59	2.17	20.66	9.50	GOOD
	P383	0.25	2.40	1.10	0.46	GOOD
	P22-2	51.73	2.46	0.89	0.36	GOOD
	P540	2.80	2.55	0.76	0.30	GOOD
	P262	22.74	2.60	0.95	0.37	GOOD
	P560	4.02	2.67	0.72	0.27	GOOD
	P75-1	3.84	2.77	1.63	0.59	GOOD
	P3-1	78.37	2.88	1.18	0.41	GOOD
	P188	5.04	2.98	0.80	0.27	GOOD
	P68-2	16.06	3.05	1.06	0.35	GOOD
	P56	0.99	3.11	1.64	0.53	GOOD
	P196	2.18	3.15	1.05	0.33	GOOD
	P198	7.47	3.23	1.22	0.38	GOOD
	P520	1.40	3.24	1.08	0.33	GOOD
	P520	0.69	3.24	1.08	0.33	GOOD
	P395	24.38	3.25	1.07	0.33	GOOD
	P71	2.48	3.25	1.71	0.53	GOOD
	P72	2.37	3.26	1.82	0.56	GOOD
	P55	4.26	3.29	0.87	0.26	GOOD
	P464	8.01	3.37	1.60	0.47	GOOD
	P74	4.06	3.37	1.29	0.38	GOOD
	P197-3	47.08	3.38	1.71	0.51	GOOD
	P55	4.26	3.41	1.17	0.34	GOOD
	P58	1.99	3.45	0.84	0.24	GOOD
	D202	3.64	3.49	1.14	0.33	GOOD
	P61	25.19	3.65	0.88	0.24	FAIR
	P75-2	5.49	3.65	1.59	0.44	FAIR
	P580	0.54	3.69	1.90	0.51	FAIR
	P285	1.70	3.73	1.38	0.37	FAIR
	P69	1.94	3.74	1.06	0.28	FAIR
	P59	15.45	3.87	1.49	0.39	FAIR
	P200	22.54	3.89	1.38	0.35	FAIR
	P310	3.21	4.05	1.17	0.29	FAIR
	D954	0.78	4.11	1.32	0.32	FAIR
	P482	1.47	4.31	1.32	0.31	POOR
	P417	2.90	4.38	1.34	0.31	POOR
	P58	1.99	4.45	1.59	0.36	POOR
	D180	1.20	4.79	1.78	0.37	POOR
	D460	0.55	5.10	2.68	0.52	POOR
	P345	8.92	5.24	1.85	0.35	POOR
	D691	2.76	5.53	2.27	0.41	POOR
	D440	2.00	5.54	2.37	0.43	POOR
	D480	0.55	5.97	2.87	0.48	POOR



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DC 29	P47-6	5.83	1.95	0.62	0.32	GOOD
	P398-2	15.90	2.21	0.66	0.30	GOOD
	D893	2.41	2.28	1.09	0.48	GOOD
	P20-1	37.87	2.37	0.81	0.34	GOOD
	P20-2	33.06	2.37	0.81	0.34	GOOD
	P415	12.62	2.45	1.37	0.56	GOOD
	P105	5.42	2.60	0.72	0.28	GOOD
	P711	5.32	2.60	0.59	0.23	GOOD
	D892	2.01	2.62	1.23	0.47	GOOD
	P109	12.12	2.67	0.93	0.35	GOOD
	P104	20.56	2.77	0.97	0.35	GOOD
	P266	13.54	2.84	1.07	0.38	GOOD
	P353	6.63	2.90	0.96	0.33	GOOD
	P110	31.71	2.94	0.79	0.27	GOOD
	P428	0.78	2.99	1.52	0.51	GOOD
	P25-3	46.16	3.06	0.96	0.31	GOOD
	P492	4.74	3.10	0.94	0.30	GOOD
	P403	6.58	3.29	1.07	0.33	GOOD
	D739	0.90	3.33	2.31	0.69	GOOD
	P459	11.85	3.33	1.36	0.41	GOOD
	P521	7.63	3.34	1.78	0.53	GOOD
	D382	5.35	3.36	0.85	0.25	GOOD
	P103-1	13.60	3.37	1.20	0.36	GOOD
	P339	3.64	3.40	1.26	0.37	GOOD
	P104	20.56	3.42	1.27	0.37	GOOD
	P387	10.37	3.45	0.86	0.25	GOOD
	P103-2	12.22	3.54	0.79	0.22	FAIR
	P711	5.32	3.54	1.64	0.46	FAIR
	D894	6.91	3.65	1.04	0.28	FAIR
	P445	3.22	3.67	1.51	0.41	FAIR
	P467	8.66	3.71	1.23	0.33	FAIR
	P330	3.21	3.93	1.67	0.42	FAIR
	D1524	4.40	3.96	0.95	0.24	FAIR
	P107	15.75	4.12	1.26	0.31	FAIR
	P710	8.10	4.12	1.51	0.37	FAIR
	D1637	1.10	4.67	1.93	0.41	POOR
	P474	2.49	5.04	1.61	0.32	POOR
	P261	1.10	5.76	2.54	0.44	POOR
Durban	P259	5.19	1.69	0.50	0.30	GOOD
	D1003	6.05	1.76	0.61	0.35	GOOD
	P455	5.64	1.92	0.77	0.40	GOOD
	P725	10.20	1.97	1.00	0.51	GOOD
	D828	2.19	1.98	0.68	0.34	GOOD
	P1-1	21.45	2.01	0.53	0.26	GOOD
	P448	11.91	2.01	0.74	0.37	GOOD
	P448	0.62	2.01	0.74	0.37	GOOD
	P96	8.29	2.02	0.82	0.41	GOOD



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	P528	11.55	2.06	0.72	0.35	GOOD
	P94	3.22	2.06	0.59	0.29	GOOD
	P94	3.13	2.06	0.59	0.29	GOOD
	P398-1	3.37	2.19	0.74	0.34	GOOD
	P398-1	2.50	2.19	0.74	0.34	GOOD
	P398-1	8.52	2.19	0.74	0.34	GOOD
	P82	12.73	2.22	1.08	0.49	GOOD
	P82	12.73	2.22	1.08	0.49	GOOD
	P385	17.26	2.24	0.85	0.38	GOOD
	P21-2	30.01	2.26	0.67	0.30	GOOD
	D728	0.40	2.32	0.97	0.42	GOOD
	P2-2	49.75	2.33	1.00	0.43	GOOD
	D995	5.45	2.34	1.20	0.51	GOOD
	P541	0.21	2.37	1.10	0.46	GOOD
	P93	26.90	2.37	0.81	0.34	GOOD
	P93	7.29	2.37	0.81	0.34	GOOD
	P80	14.20	2.41	2.29	0.95	GOOD
	P426	6.26	2.42	0.72	0.30	GOOD
	P85	0.51	2.42	0.95	0.39	GOOD
	P85	11.00	2.42	0.95	0.39	GOOD
	P2-2	49.75	2.43	1.19	0.49	GOOD
	P400	6.20	2.46	0.72	0.29	GOOD
	P400	6.20	2.46	0.72	0.29	GOOD
	P93	7.29	2.47	1.12	0.45	GOOD
	P93	26.90	2.47	1.12	0.45	GOOD
	P324	0.52	2.50	1.58	0.63	GOOD
	P454	12.76	2.50	1.38	0.55	GOOD
	P256	1.23	2.59	1.02	0.39	GOOD
	P2-1	1.09	2.60	1.08	0.42	GOOD
	P2-1	6.54	2.60	1.08	0.42	GOOD
	P2-1	7.17	2.60	1.08	0.42	GOOD
	P2-1	1.09	2.60	1.08	0.42	GOOD
	P152	4.98	2.63	0.81	0.31	GOOD
	D766	0.47	2.64	1.04	0.39	GOOD
	P245	7.37	2.65	0.92	0.35	GOOD
	P100	15.80	2.66	0.99	0.37	GOOD
	P506	1.45	2.71	0.97	0.36	GOOD
	P1-3	24.20	2.75	1.23	0.45	GOOD
	P585	2.01	2.78	1.34	0.48	GOOD
	P3-2	11.58	2.84	0.98	0.34	GOOD
	P461	5.70	2.93	1.07	0.36	GOOD
	P255	15.79	2.95	1.82	0.62	GOOD
	P556	1.53	2.96	0.98	0.33	GOOD
	P448	11.91	2.98	1.52	0.51	GOOD
	P448	0.62	2.98	1.52	0.51	GOOD
	P448	11.91	2.98	1.52	0.51	GOOD
	D210	7.90	2.99	1.22	0.41	GOOD



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District Council	Road No.	Length	Average IRI	Standard Deviation	Coefficient of Variance	Rating
	P78	3.80	3.07	0.91	0.30	GOOD
	P76	0.82	3.12	1.66	0.53	GOOD
	P197-1	10.94	3.13	1.43	0.46	GOOD
	P197-1	1.19	3.13	1.43	0.46	GOOD
	P98	9.40	3.13	1.13	0.36	GOOD
	P578	1.78	3.16	1.13	0.36	GOOD
	D140	0.59	3.17	1.60	0.51	GOOD
	P259	5.19	3.22	1.17	0.36	GOOD
	P79	14.13	3.33	1.56	0.47	GOOD
	P242	9.95	3.34	1.18	0.35	GOOD
	D791	0.52	3.35	1.91	0.57	GOOD
	P88	4.36	3.35	1.21	0.36	GOOD
	P559	7.61	3.45	1.61	0.47	GOOD
	P504	2.92	3.53	1.57	0.44	FAIR
	P1-2	13.75	3.58	1.87	0.52	FAIR
	D1002	6.34	3.71	1.90	0.51	FAIR
	D1004	12.91	3.75	1.62	0.43	FAIR
	D1028	0.30	3.84	1.83	0.48	FAIR
	P119	1.20	3.94	2.51	0.64	FAIR
	P99	0.49	4.12	1.84	0.45	FAIR
	D435	1.14	4.17	2.40	0.58	FAIR
	P457	2.14	4.21	1.84	0.44	POOR
	P529	3.58	4.32	8.75	2.03	POOR
	P551	5.74	4.56	1.51	0.33	POOR
	P530-1	1.25	4.65	1.85	0.40	POOR
	P100	15.80	4.70	1.06	0.23	POOR
	D521	6.50	4.98	1.39	0.28	POOR
	P138	5.53	5.00	1.62	0.32	POOR
	P97	1.54	5.10	2.75	0.54	POOR
	D499	0.95	5.15	2.13	0.41	POOR
	P530-2	3.12	5.15	1.76	0.34	POOR
	P239	4.07	5.79	1.65	0.28	POOR
	D520	0.66	5.82	2.45	0.42	POOR