



2014

ROAD TRAFFIC VOLUME MALAYSIA (RTVM)



MINISTRY OF WORKS MALAYSIA
HIGHWAY PLANNING DIVISION

First published in 1982

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FOREWORD



SECRETARY GENERAL MINISTRY OF WORKS MALAYSIA

Assalamualaikum Warahmatullahi Wabarakatuh, Salam Sejahtera and Salam 1Malaysia,

I am delighted to endorse this Road Traffic Volume Malaysia (RTVM) 2014 which has been an annual report by the Ministry. This continual effort by Highway Planning Division is to document traffic data and road conditions of Malaysia's road networks.

The RTVM is widely used as a source of reference for research and study. This report provides a comprehensive and updated view of the traffic condition nationwide.

Finally, it is my hope that RTVM 2014 will continue to benefit all parties involved in our journey of achieving the Government of Malaysia's aspiration and transformation plan of a high income, innovative and developed nation status.

DATO' SRI ZOHARI BIN AKOB
Secretary General
Ministry of Works Malaysia

June 2015

INTRODUCTION



UNDERSECRETARY HIGHWAY PLANNING DIVISION

Assalamualaikum Warahmatullahi Wabarakatuh,

I would like to begin my writing for this edition with a heartfelt thank you to all the participating parties. This annual report has been published since 1982 and has benefited many parties.

The National Traffic Census is a biennial programme conducted for the purpose of traffic data collection and updating current status of federal and state roads condition around Malaysia. To-date, there are 554 stations erected around the country. The data collected from these census stations are published annually in the Road Traffic Volume Malaysia (RTVM). This year, we have included articles relating to the development of road networks and how it is essential to development of local areas within identified economic regions in Malaysia.

Through this publication, we hope to assist and fulfill the needs of all involved in planning and building of road networks with a shared vision to constantly improve the development of road infrastructures in terms of planning, managing and cost effectiveness for each project.

We appreciate any constructive reviews and suggestions regarding the publication, so we may improve the quality of its content for the benefit of all in the future.

Lastly, on behalf of Highway Planning Division, I would like to thank all involved quarters in the making of this report, especially the Public Works Department Malaysia, Malaysian Highway Authority, Road Transport Department Malaysia and other agencies' cooperation in providing us with their support to publish RTVM 2014.

Dr. JAMILAH MOHD MARJAN
Undersecretary
Highway Planning Division
Ministry of Works Malaysia

June 2015

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NOTE TO USER

NATIONAL TRAFFIC CENSUS

There are a total of 554 traffic census stations in Malaysia and the census data in both directions are recorded hourly for the Federal Roads and the State Roads in Malaysia. The form used for the manual data collections is as in Appendix "A".

The National Traffic Census is carried out twice a year during the month of March/ April and September/ October, conducted by the State Public Works Department (JKR Negeri) and coordinated by Highway Planning Division. The census data will be submitted to Highway Planning Division for further data analysing and processing.

Data collections are divided into three types as Figure 1-1:

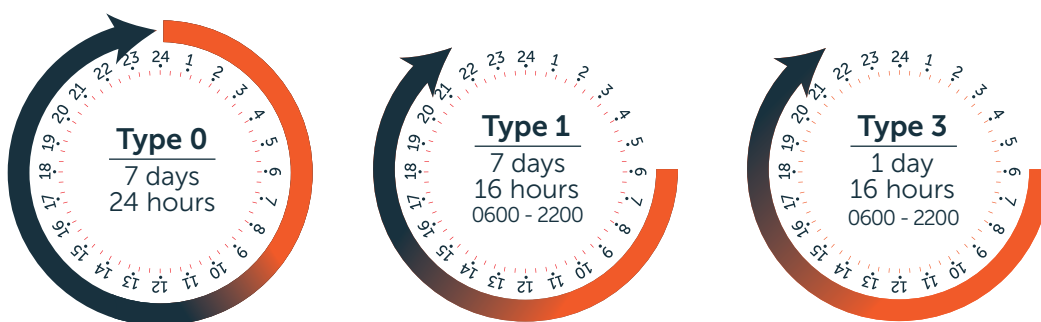


Figure 1-1: Types of Data Collection for National Traffic Census

In RTVM, the vehicles are classified into six classes as shown in Figure 1-2:

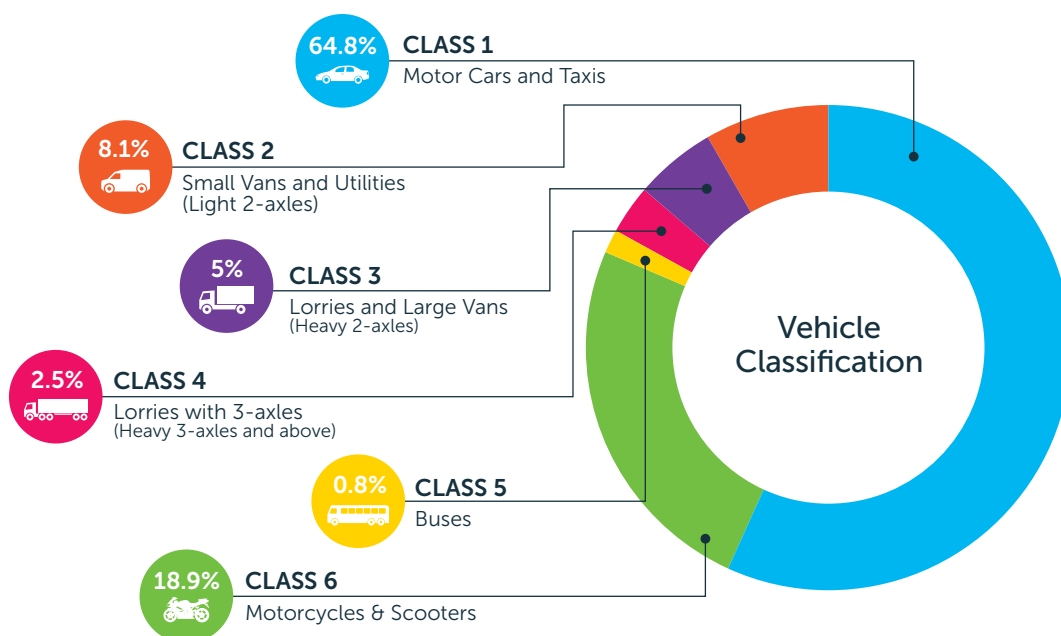


Figure 1-2: Vehicle Classification and Composition

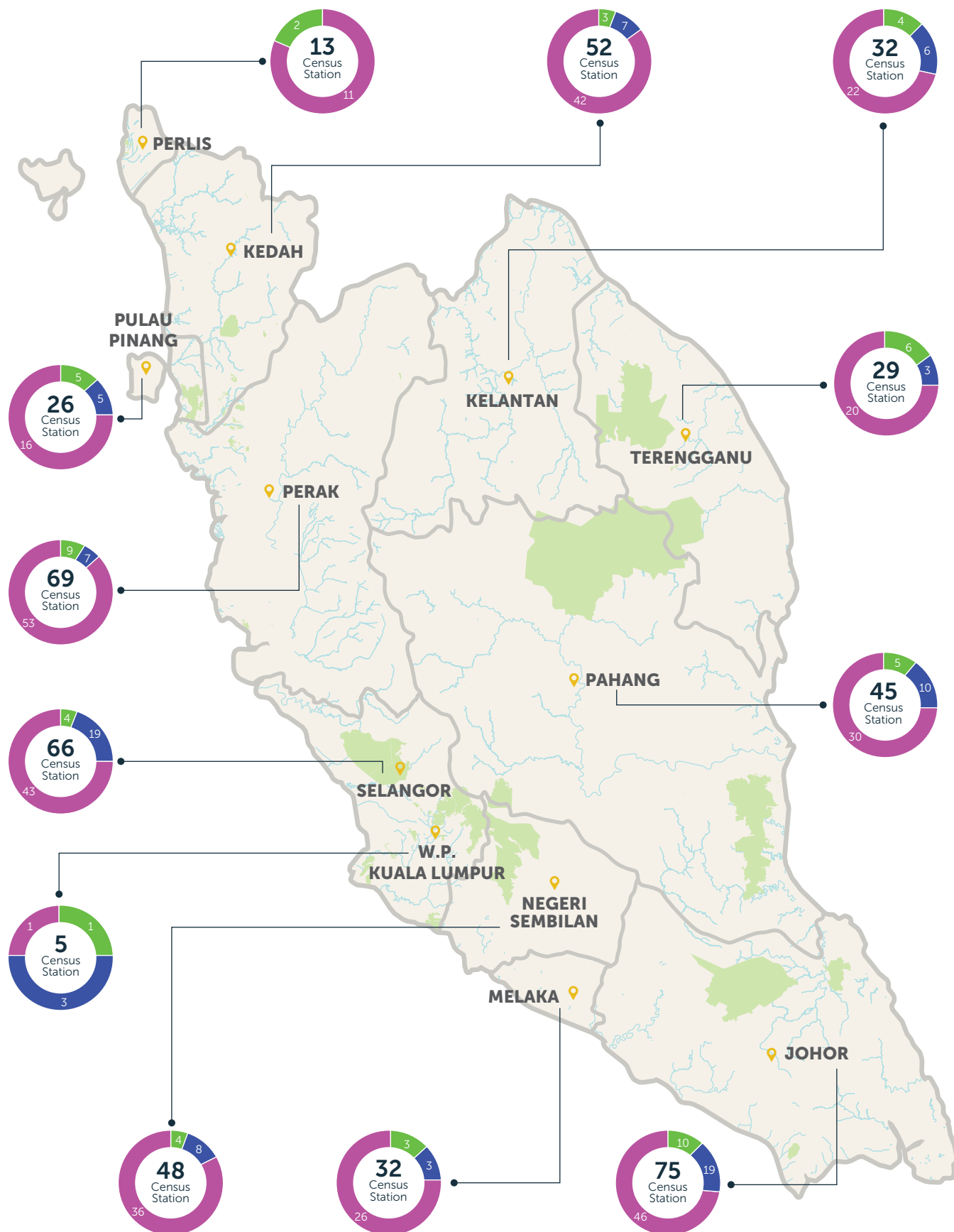
Figure 1-2 shows the overall composition according to the vehicle classification on Malaysian roads based on National Traffic Census at the 554 census stations for the year 2014.

The ratio of bus to cars and taxis is 1:65. The amount of Small Vans and Utilities is almost the total amount of both Class 3 and Class 4 lorries combined. Motorcycles and Scooters are the second largest amount of vehicles on the road, after cars and taxis.

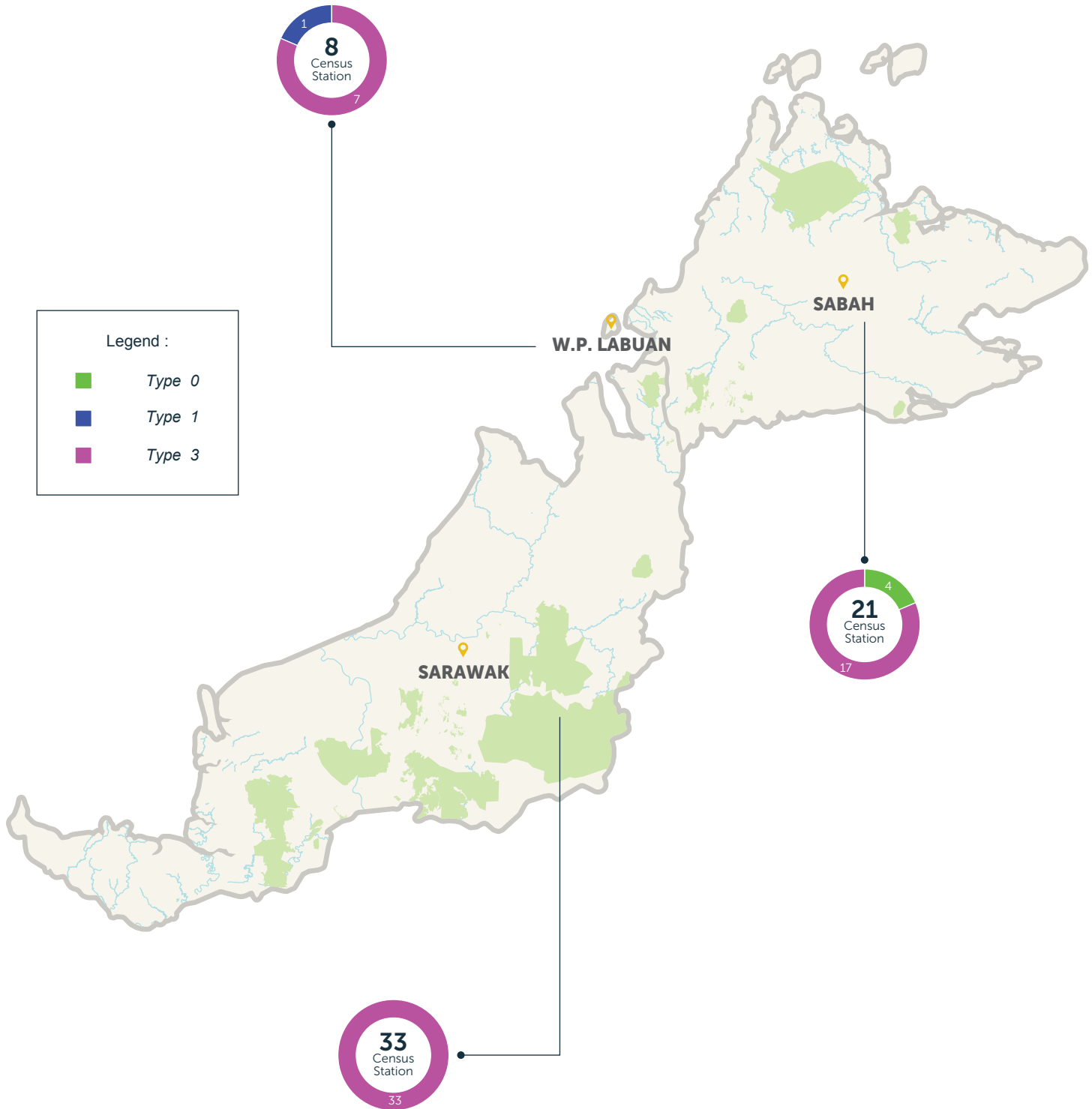
TRAFFIC CENSUS STATION DISTRIBUTION MAP

PENINSULAR MALAYSIA

492 TRAFFIC CENSUS STATIONS



62 TRAFFIC CENSUS STATIONS

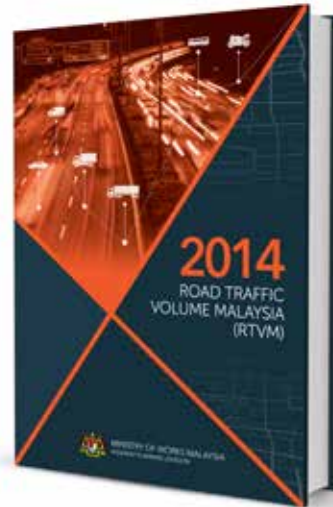


NOTE TO USER

ROAD TRAFFIC VOLUME MALAYSIA (RTVM)

Road Traffic Volume Malaysia (RTVM) was first published in 1983 in the form of printed copy and beginning in 1999 in the form of digital copy (Compact Disc). Starting from 2014, RTVM is available in the online version.

The National Traffic Census data collected from the State Public Works Department (JKR Negeri) are analysed and documented in the RTVM. The RTVM report of current year will be published in the month of June the following year.



RTVM is available to the public for online version at RM 50.00. The access code can be purchased at :-



✉ Cawangan Pengurusan Perolehan dan Harta,
Ground Floor, Block A, Ministry of Works,
Jalan Sultan Salahuddin, 50580 Kuala Lumpur.

☎ 03 2771 4096

☎ 03 2711 1944

🌐 <http://rtvm.kkr.gov.my>

The content of RTVM consists of:

- Location of Traffic Census Stations
- Daily Traffic Volume
- Traffic Growth Data
- Summary of Traffic Data on Highways in Malaysia
- Summary of Vehicle Registration Statistics in Malaysia
- Summary Statistics of Road Mileage in Malaysia

ROAD TRAFFIC VOLUME MALAYSIA (RTVM)

The benefits of RTVM are as follows:

- Provides proper road network planning and roadside development
- Provides detailed study on the traffic flow criteria
- Provides current traffic information for research and study
- Provides comprehensive overview about the current road capacity
- Provides current Level of Service (LOS) of the respective roads. Kindly refer to Appendix "C" for types of LOS
- Provides information on the traffic growth and projection of traffic

LEVEL OF SERVICE (LOS)

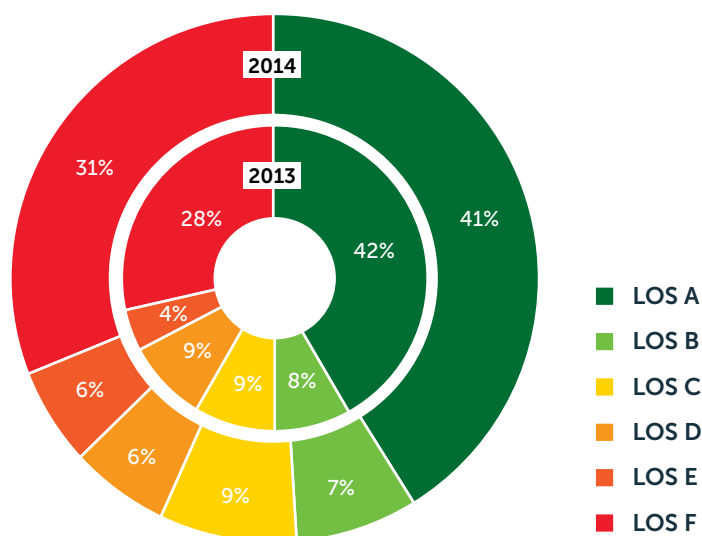


Figure 1-3: Distribution of Level of Service (LOS) of the Road at the 554 Census Stations in 2013 & 2014

Level of Services (LOS) are qualitative measures that describe traffic conditions in terms of speed, travel time, freedom to manoeuvre, comfort, convenience, traffic interruption and safety. LOS A represents the best condition, while LOS F represents heavily congested flow with traffic demands exceeding highway capacity.

By referring to the National Traffic Census 2014, Figure 1-3 shows that 31% of the roads in 2014 at the 554 census stations is already saturated (LOS F). The percentage increased 3% compared to the previous year. The percentage of roads with LOS E also increased compared to previous year. In contrast, the percentage of roads with LOS A, B and D in 2014 decreased from 2013. Meanwhile the percentage of roads with LOS C remains the same. These shows that the Level of Service (LOS) of these roads getting worse due to the increase of traffic volume at the particular roads.

NOTE TO USER

TRAFFIC SCENARIO IN MALAYSIA

In the RTVM, the traffic growth rates are obtained based on the calculation of compound "normal" traffic growth in terms of percentage growth of total traffic per year by the Method of Least Square Regression Analysis of traffic flow data of immediate past ten years (2005-2014) Extrapolation based on this rate is used for the capacity year computation. Capacity Year means the year at which the forecast traffic volume equals the computed road capacity.

The Malaysia Yearly 16-Hour Traffic Volume (2005-2014) based on National Traffic Census Stations as shown in Figure 1-4 shows that there's a 1.9% decrease in 2014 16-Hour traffic volume compared to the previous year. This represents a decrease in traffic volume for the first time in ten years. In case of referring to the traffic volume by state, only five states alone have an increase of the traffic volume over the previous year, which are Kedah, Negeri Sembilan, Melaka, Sabah and W.P. Labuan; while others experienced decrease.

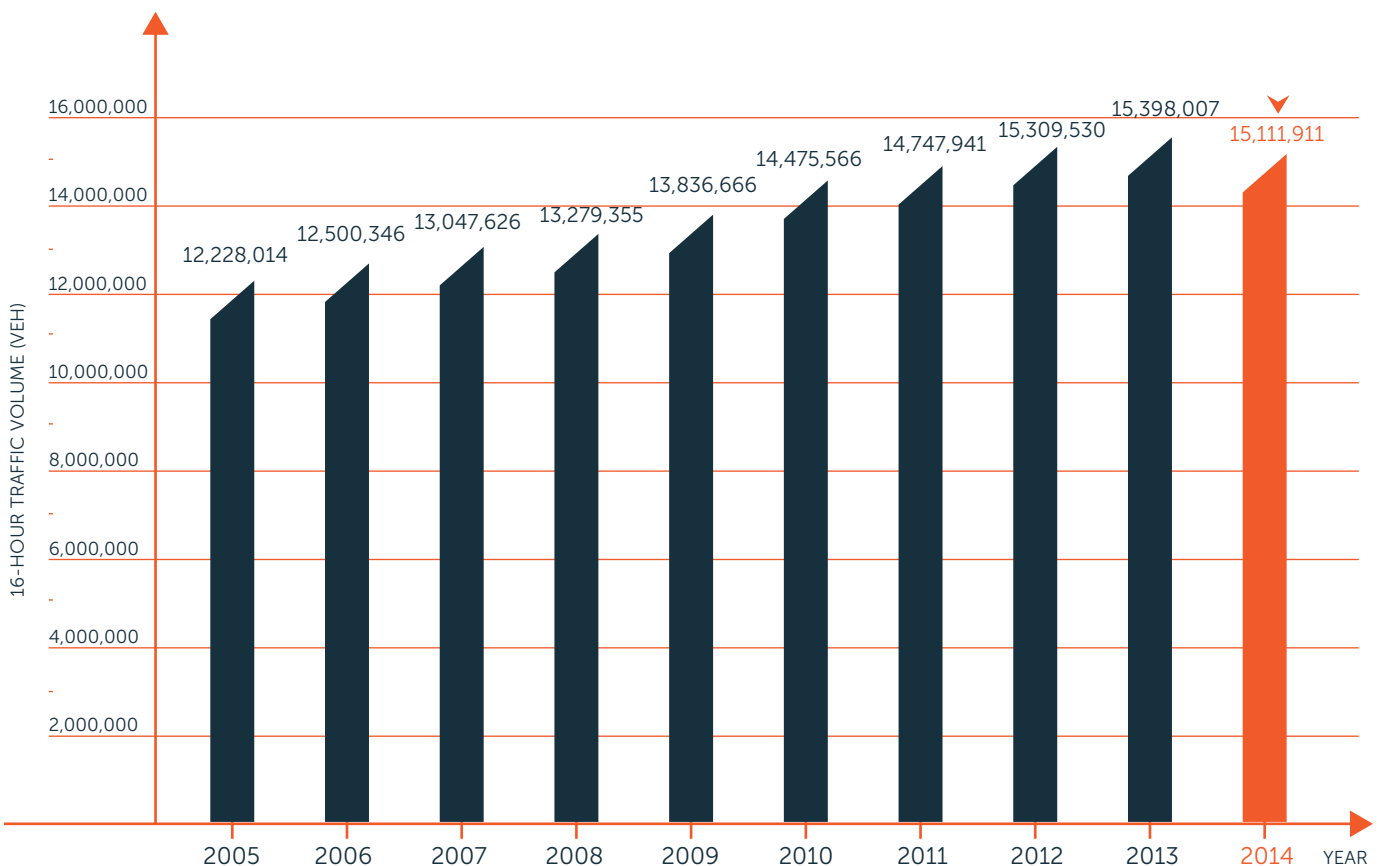


Figure 1-4: Yearly 16-hour Traffic Volume (2005 - 2014) in Malaysia

By referring to the Figure 1-5, the 2014 Normal Traffic Growth Rate (%) based on National Traffic Census in Malaysia at the 554 census stations is 2.74%. This value was obtained from the equation of the exponential trendline for the 10 years 16-hour traffic volume.

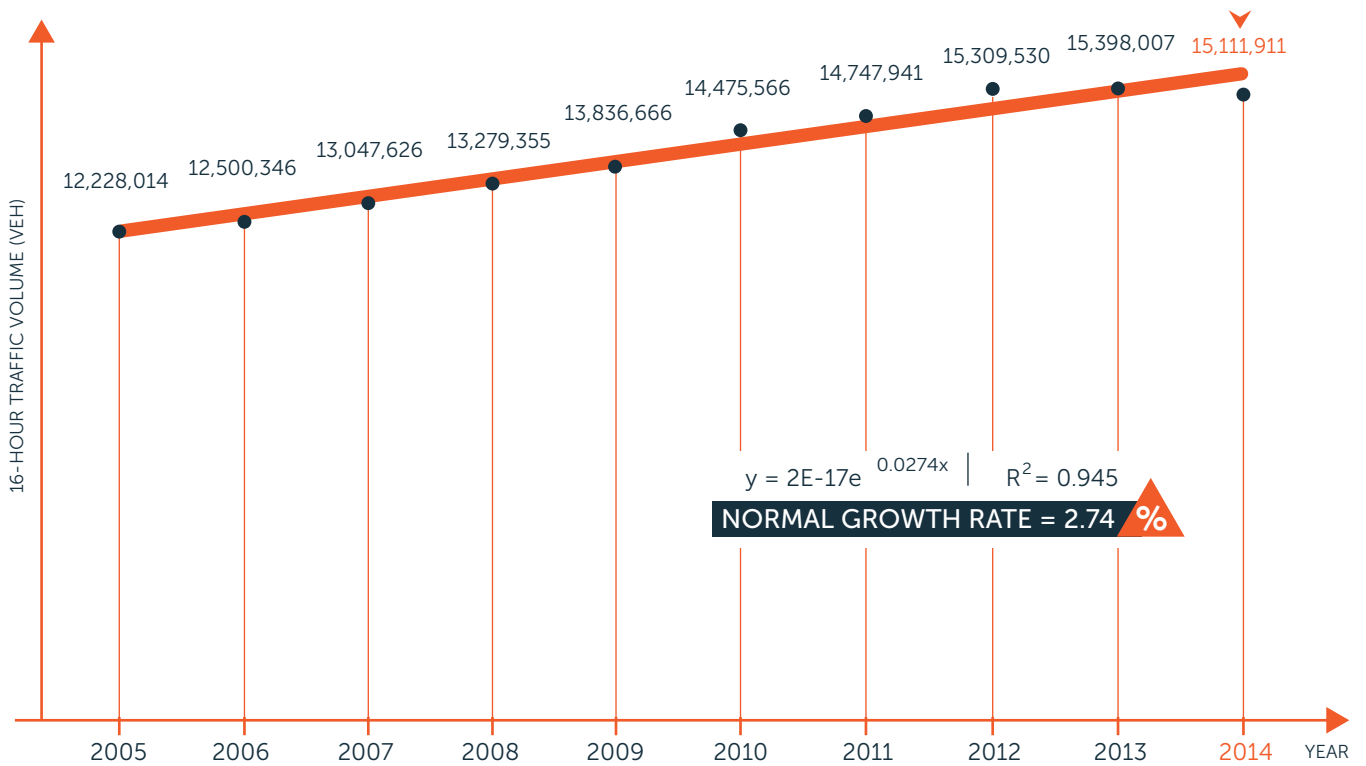


Figure 1-5: Normal Traffic Growth with Exponential Trendline for the year 2014 in Malaysia





ARTICLES

- *Promoting Interrelation of Roads and Improving Traffic Mobility within Sabah and Sarawak via Pan Borneo Expressway*
- *Inter-Connection of State Roads in Peninsular Malaysia in Associating Central Spine Road Network*
- *The Iskandar Regional Development Authority (IRDA) Gateway*
- *Giving Way To The Cargo - Bandar Sultan Suleiman*



PROMOTING INTERRELATION OF ROADS AND IMPROVING TRAFFIC MOBILITY WITHIN SABAH AND SARAWAK VIA PAN BORNEO EXPRESSWAY

The Pan Borneo Highway is a road network in Borneo Island which is connecting two Malaysian states, Sabah and Sarawak, with Brunei. It is a Federal Government project which is part of the Highway Network Development Plan (HNDP) 2010 by Ministry of Works Malaysia.

SARAWAK

The Sarawak stretch of the Pan Borneo Highway would trigger intensive economic growth and transform the life of the people in the state. The highway would also help realise the Government's efforts to bring development to the people, as the road links major cities in the state and connects to a highway in Sabah.

The Pan Borneo Highway, totalling of 936 km long road, would open up development opportunities and improve inter-city links.

Prime Minister Datuk Seri Najib Tun Razak launched the first phase of the construction in March 2015 - a 43km long road from Simpang Nyabau in Bintulu to Bakun junction which is expected to be completed in 30 months.

Construction of the second phase of the Pan Borneo Highway linking Sarawak and Sabah will start in September 2015 and is expected to be completed in 2023. This stretch starts from Tanjung Datu to Lundu junction and from Lundu junction to Miri.

For the third phase, it would commence in 2018, from Lawas to Limbang. The whole Pan Borneo Highway in Sarawak is expected to be completed by 2023.

The purpose of this highway project is to improve overall traffic condition along the Federal Main Road. The government will upgrade the main intersections, bridges, construct pedestrian bridges and implement a 4-lane 2-way dual carriageway.

The success of this project will improve the LOS of Simpang Nyabau to Simpang Bakun from LOS D to LOS B, increasing the comfort and security of motorists where a reduction in the average



The purpose of this highway project is to improve overall traffic condition along the Federal Main Road. The government will upgrade the main intersections, bridges, construct pedestrian bridges and implement a 4-lane 2-way dual carriageway.

travel time from 60 minutes to 30 minutes. The risk of accidents will be reduced and it is expected to boost socio-economic activities among local communities.

SABAH

For the Pan Borneo Highway project in Sabah, it is now in the process of negotiation between the federal and state government and other parties concerned. The highway with a total distance of over 727km in Sabah is expected to take about six to eight years to be fully completed.

A part of this project is to upgrade the road from Jalan Donggongan to Simpang Jalan Papar Spur, Sabah which links to Pekan Donggongan in Penampang, at a length of 41.3 km.

The on-going construction work of Package 1 is expected to be completed by end of 2015. The original scope of Package 1 is to upgrade the existing road to 4-lane two-way road till KM post 13.7. Package 2 and 3 are in the procurement process and expected to be completed by 2018. The initial scope of package 2 and 3 is to upgrade a single 2-lane road (R3) to a 4-lane dual carriageway (R5) starting from Kg. Lankuas, Kinarut to Benoni roundabout, Papar which is 27.5km long. This work includes land acquisition and utilities relocation.

The existing alternative State Road (Jalan Lok Kawi - Pengalat - Papar) is badly congested with heavy vehicles and has reached level of service (LOS) "F".

The need to introduce new road-upgrading project is to ensure safety and comfort to road users. Severe traffic congestion at Sigar roundabout is caused by incoming traffic from four routes of multiple 4 lanes and 2-way lanes. This chaotic traffic situation creates bottleneck condition enroute to Pekan Donggongan and Papar from Pekan Donggongan

During peak hour, an hour and a half of travelling time is required from Kota Kinabalu to Papar, which is 52 km in distance. Based on traffic analysis by Highway Planning Division, Ministry of Works, LOS during peak hour along the road has reached LOS E by 2014.

In terms of road safety, the existing road width (7m) is considered as too narrow. The condition of unpaved road shoulders increases the risk of accidents to road users. The existing road conditions are also seen as not conducive to the development of the surrounding area, such as Lok Kawi Industrial Zone.

Through the implementation of this project, the Government aims to see an improvement from LOS from 'E' to LOS 'B' upon completion. Travel time saved from Donggongan to Lok Kawi could be reduced from 30 minutes to 15 minutes (13.7km).

Lastly, property values are expected to increase in the surrounding areas. Residents on the west coast of Sabah can generate economic growth with the opening of new areas of development and improve their quality of life.



THE INTERCONNECTION OF FEDERAL ROADS IN PENINSULAR MALAYSIA IN ASSOCIATING CENTRAL SPINE ROAD NETWORK

Central Spine Road is a new highway which is under construction in the central of Peninsular Malaysia. The 390 km toll free highway replaces the former 2-lane Gua Musang Highway and Karak-Tampin highway.

The project involves widening of the existing Federal Route 8 and 9 to a dual 2-lane carriageway beginning from the south of Simpang Pelangai, Bentong, Pahang to the north of Kuala Krai, Kelantan, where the route will connect to the committed Kota Bharu - Kuala Krai Highway. This project is carried out due to existing traffic data whereby the government has identified the Federal Route 8 had reached Level of Service (LOS) D at census station DR801 (Kota Bharu - Gua Musang) and LOS F at census station DR802 (Kota Bharu- Kuala Krai).

The road is considered as a corporate social responsibility of the government to the people of Pahang and Kelantan. This project is incorporated with the Highway Network Development Plan (HNDP), 2007 published by Highway Planning Unit, Ministry of Works.

The highway will improve the overall traffic condition by reducing the accident risks such as sharp corners and animals. It also intends to increase the Level of Service (LOS) during peak hour of the existing Federal Route 8 from LOS F to LOS B when the new road is completed.

improvements and some local re-alignment which follow the existing Federal Road corridor. This project is expected to be completed by 2020 especially from Kota Bharu to Bentong.

Some parts of the Central Spine Road (CSR) Expressway has officially been opened for public, involving four stretches from the overall 390km project, which starts from Bentong to Gua Musang, Kelantan. The new stretches are six kilometres shorter, and would reduce the travelling distance from 43.7km to 37.4km and travelling time from 90 minutes to 70 minutes. The routes are involving four sections, known as Section 3F1 and 3F2 along 13.2km from Kampung Kubang Rusa to Felda Chegar Perah, were opened on 10th January and 5th July. The second path involving 24.2km of Section 3G and 3H from Felda Chegar Perah II to Kampung Kechur was opened on 13th July. It provides a good alternative for Kuala Lumpur motorists returning to Kelantan compared to the East Coast Highway 1.

CSR Construction also gained the attention of the Department of Wildlife and National Parks (Wildlife), and won praise from non-governmental organizations (NGOs), local and abroad for building animal crossing route under three bridges, known as Eco-Bridge along 1.35km as it is located between the Main Range and National Park.

The initiative to build a new route (alternative route) from Kota Bharu to Kuala Krai is aimed to improve the level of accessibility, comfort and safety of the road users. The highway will improve the overall traffic condition by reducing the accident

risks such as sharp corners and crossing animals. It also intends to increase the Level of Service (LOS) during peak hour of the existing Federal Route 8 from LOS F to LOS B when the new road is completed. It is hoped that it will boost the economic activity of the local people who reside by the route.

The project also provides connectivity, accessibility, and mobility by providing quality infrastructure in rural areas to reduce the urban-rural development gap.

With the completion of this project, the estimated travelling time savings from Kota Bharu to Kuala Krai, Kelantan can be reduced from 3 hours to 45 minutes, provide accessibility and connectivity to local residents of Federal Route 8 & Federal Route 3. Finally, the surrounding area throughout the ranks would increase local economic activity and stimulate economic growth.



THE ISKANDAR REGIONAL DEVELOPMENT AUTHORITY (IRDA) GATEWAY

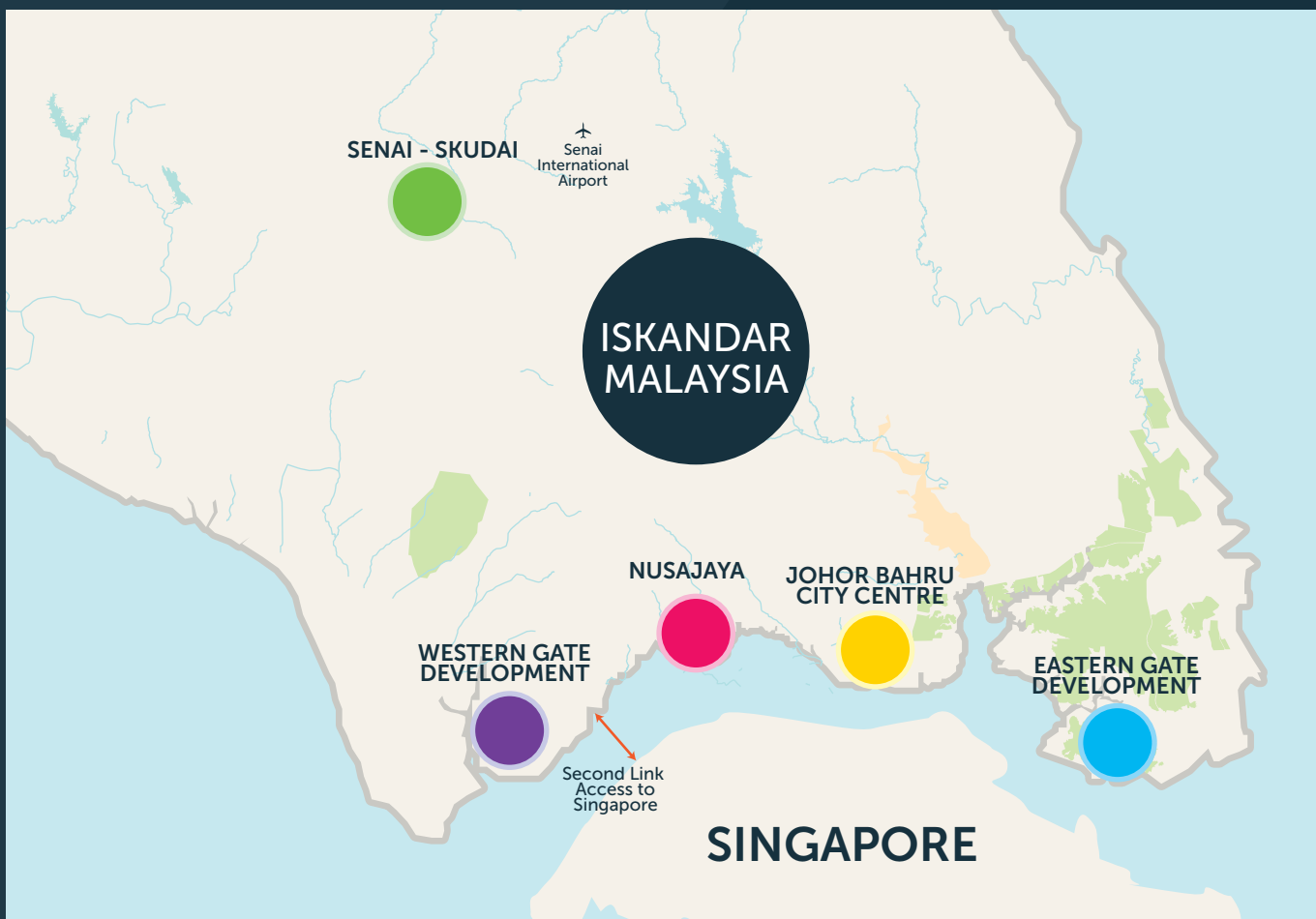
The Iskandar Regional Development Authority (IRDA) is a Malaysian Federal Government statutory body tasked with the objective of regulating and driving various stakeholders in both public and private sector. IRDA has an integrated planning mechanism to ensure world-class benchmark that is emulated in developing urban transportation.

There are 90 development projects that have been approved. 82 projects were already completed while the rest are in the process of completing. These projects are implemented in order to gain a better result in line with environmental sustainability, economic and social entities. The implementation of this project is reckoned to increase economic activities, land value, property value, land use efficiency, household income, job creation, investors'

confidence, service penetration, increase number of tourist and to lessen service interruption.

Among the achievements in 2012 were the implementation of Tanjung Kupang CIQ. The CIQ manage to reduce the waiting time from 4 hours to 1 hour whereby 87% of frequent travellers are satisfied with contra lane. The major components of the project are the Second Crossing Bridge, 44 kilometers of expressways, The Sultan Abu Bakar Customs, Immigration and Quarantine Complex, 3 toll plazas, 2 rest and service areas and other ancillary facilities. The bridge was designed to accommodate up to 200,000 vehicles per day.

Along with this, 97% tenants of Rumah Iskandar Malaysia were satisfied with the facilities provided



Fostering Linkages With Neighbouring Regions

and the rental rate is 66% cheaper compare to the average rate based on sqft value (compared to market price).

As for Ulu Tiram Intechange, under the Ninth Malaysia Plan Project, the main road between Ulu Tiram and Kota Tinggi was upgraded into 4 lanes dual-carriageway. This includes the construction of several bridges along the road.

With the completion of the Ulu Tiram Interchange, travelling time can be reduced from 60 minutes to 40 minutes and road Level of Service is improved from LOS E to LOS A. The project was started in March 2009 and completed in 2011.

In April 2012, the construction of the 14.6km Coastal Highway linking Danga Bay and Nusajaya that is able to accommodate between 90,000 and 120,000 vehicles daily were completed. It reduces travelling time between Johor Baharu and Nusajaya to only 15 minutes. The Coastal Highway has succeeded in attracting many local property investors to areas such as Gelang Patah and Nusajaya, which were previously less competitive due to the lack of accessibility.

In 2013, the road Level of Service has improved for the Skudai - Senai Highway (LOS E to LOS B), Jalan Yahya Awal and Jalan Abu Bakar interchanges (LOS E to LOS A), Jalan Skudai - Jalan Abu Bakar (LOS A) and the coastal Highway (LOS B).

The construction of Pengerang Integrated Petroleum Complex (PIPC) is one big step in creating high value to the downstream oil and gas value chain in Johor. It is one of the project where Ministry of Works is involved in constructing new road.

IRDA has an integrated planning mechanism to ensure world-class benchmark that is emulated in developing urban transportation. There are 90 development projects that have been approved. 82 projects were already completed while the rest are in the process of completing. These projects are implemented in order to gain a better result in line with environmental sustainability, economic and social entities.

The Ministry of Works has identified through traffic data obtained from the census station JR403 that traffic flow from Kota Tinggi to Pengerang has reached LOS C. The same characteristic applies for JR409, which has shown that the traffic condition from Kota Tinggi to Johor Bharu is reaching LOS F.

In conclusion, the government plays a vital role to improve roads in the existing development areas in order to facilitate better traffic flow.

GIVING WAY TO THE CARGO - BANDAR SULTAN SULEIMAN

Port Klang is a town and the main gateway by sea into Malaysia. Located in the District of Klang, it is the largest port in the country and is the 12th busiest container port in the world as reported in 2012.

The Port Klang Authority administers three ports in the Port Klang area namely Northport, Southport and Westport. Bandar Sultan Suleiman is a township in Port Klang, Selangor located near Northport.

In early 2011, a project to upgrade the intersection in Bandar Sultan Suleiman and Door 2 of the Northport was initiated. With this project, the government expects to reduce traffic congestion at Jalan Kurau towards Klang and Port Klang.

The other objectives with this project are to build road network with excellent infrastructures and connecting road between land transportation and sea transportation.

The scope of work for the implementation of this project is the construction of Ramp A Jalan Kurau leading to Klang using a tiered structure of spine beam from Ch 650 to Ch 1130. The construction of Ramp B Jalan Kurau leading to the Northport uses a tiered structure of spine beam from Ch 0 to Ch 140.

The construction of under bridge at Jalan Parang (eastbound) uses a hierarchical structure of spine beam from Ch 480 to Ch 655 which are then met by the existing ramp at Jalan Parang.

Based on traffic Census Stations data in Port Klang at BR103 which is located at 2.4km Jalan Pelabuhan - near Northport, the Level of Service is at "F". Congestion on this road is expected to delay smooth traffic flow running leading to Port Klang and Northport. The Ministry of Works has plans to improve the traffic condition at this particular section.

The Government hopes the infrastructure improvements will keep pace with economic development advances in the surrounding area.



The other objectives with this project are to build road network with excellent infrastructures and connecting road between land transportation and sea transportation.



Gua Kelam, Perlis

PERLIS

INDERA KAYANGAN

13 Census Stations

Road Length : **1,975.78 km***

Land Area : **821 km²****

Population : **227,025 people****

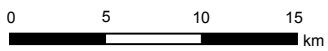
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

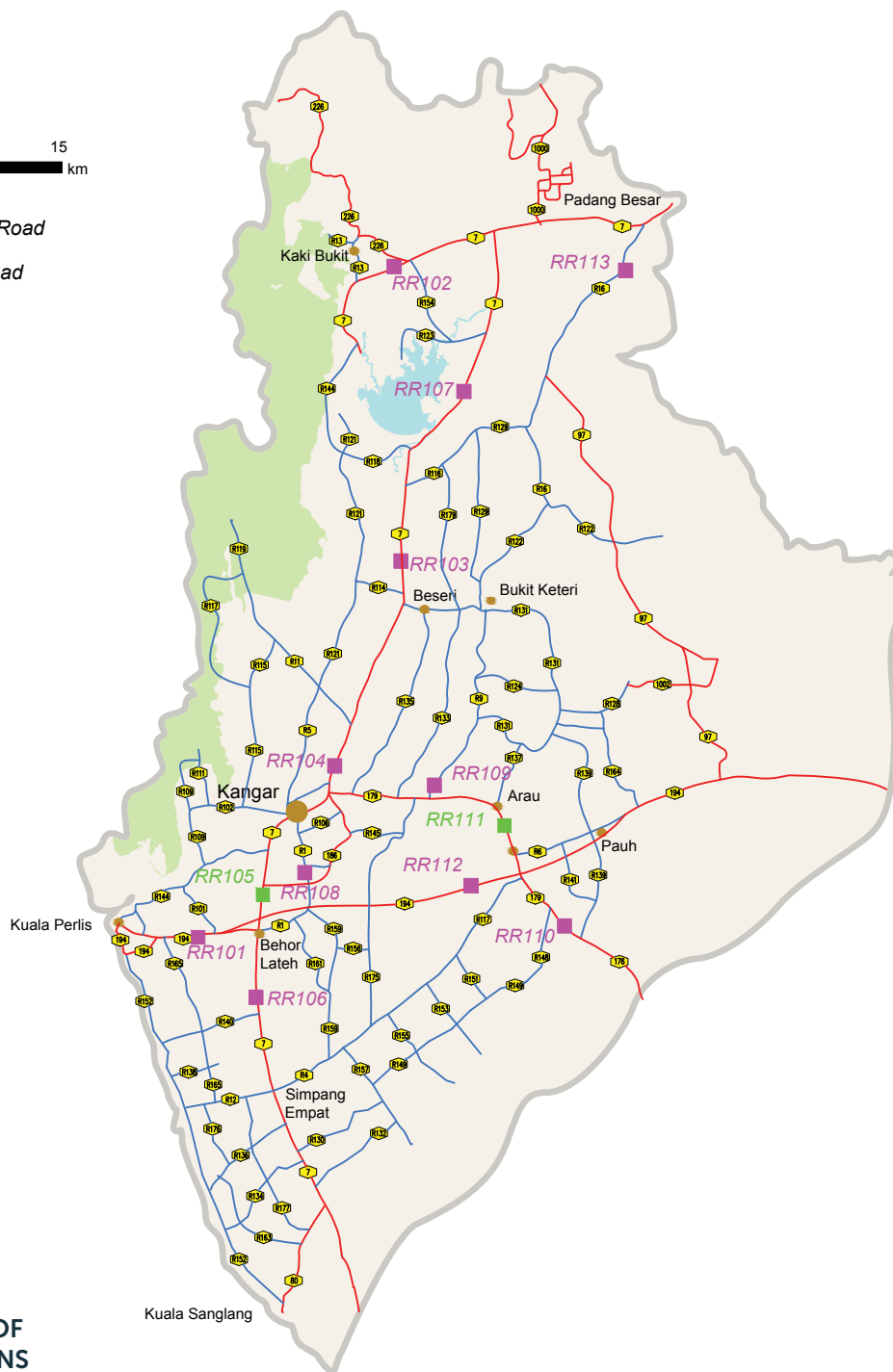
TRAFFIC CENSUS STATION MAP

STATE : **PERLIS**

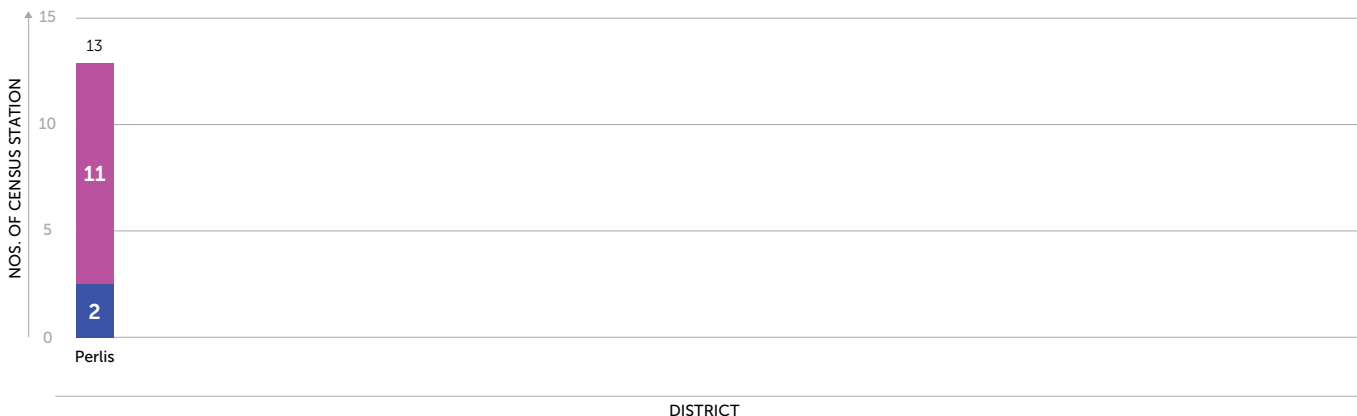
LEGEND



- Federal Road
- State Road
- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PERLIS**

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
RR101	3	194	5.0	Kuala Perlis - Changlun (100m from Kg.Behor Lateh junction)	N : 6° 23' 37.0" E : 100° 09' 24.2"	Dual	4
RR102	3	265	30.5	Titi Tinggi - Tasoh	N : 6° 38' 14.3" E : 100° 13' 14.2"	Single	2
RR103	3	7	10.6	Kangar - Padang Besar	N : 6° 31' 23.5" E : 100° 13' 46.5"	Single	2
RR104	3	7	2.0	Kangar - Padang Besar	N : 6° 27' 08.3" E : 100° 12' 23.2"	Dual	4
RR105	0	7	3.5	Kangar - Alor Star (Seriab)	N : 6° 24' 46.8" E : 100° 10' 57.7"	Dual	4
RR106	3	7	8.1	Kangar - Alor Star (Behor Mali)	N : 6° 22' 16.8" E : 100° 10' 59.6"	Single	2
RR107	3	7	22.6	Kangar - Padang Besar (Titi Tinggi)	N : 6° 37' 04.7" E : 100° 15' 24.9"	Single	2
RR108	3	R1	2.2	Jalan Raja Syed Alwi	N : 6° 24' 56.8" E : 100° 11' 57.1"	Dual	4
RR109	3	R9	5.5	Mata Ayer - Beseri (Persimpangan Arau)	N : 6° 26' 44.8" E : 100° 14' 28.1"	Single	2
RR110	3	179	14.0	Kangar - Kodiang (Arau)	N : 6° 24' 10.8" E : 100° 17' 29.5"	Dual	4
RR111	0	179	9.9	Kangar - Kodiang (Arau)	N : 6° 26' 19.1" E : 100° 16' 02.5"	Dual	4
RR112	3	194	16.0	Kuala Perlis - Changlun (2km from Arau - Kuala Perlis bridge)	N : 6° 24' 47.2" E : 100° 14' 33.2"	Dual	4
RR113	3	R16	22.2	Jalan Kubang Tiga - Padang Besar Ke Chuping	N : 6° 35' 07.0" E : 100° 16' 47.6"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERLIS**

MARCH 2014

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
RR101	-	15,412	1,901	0700-0800	63.9	2.9	4.0	0.3	3.1	25.9	100.0
RR102	-	3,787	535	0700-0800	46.1	5.3	5.7	0.1	0.6	42.1	100.0
RR103	-	14,847	1,878	0700-0800	62.4	3.1	2.8	0.5	0.6	30.7	100.0
RR104	-	22,439	2,572	1700-1800	69.6	2.3	2.2	0.2	0.5	25.2	100.0
RR105	27,802	24,585	2,259	1700-1800	67.8	4.8	3.7	0.3	1.9	21.5	100.0
RR106	-	14,422	1,472	0700-0800	61.4	5.9	3.7	1.8	1.6	25.6	100.0
RR107	-	5,750	527	1700-1800	58.5	10.2	3.6	1.1	1.8	24.8	100.0
RR108	-	23,293	2,346	1700-1800	64.5	4.0	2.1	0.4	0.6	28.4	100.0
RR109	-	5,054	493	1600-1700	68.2	3.2	2.2	0.8	0.2	25.4	100.0
RR110	-	10,182	977	1800-1900	70.3	4.3	3.4	0.8	0.5	20.7	100.0
RR111	31,326	27,959	2,511	1700-1800	63.8	6.4	2.2	0.4	0.4	26.8	100.0
RR112	-	14,456	1,500	1700-1800	67.4	5.8	5.9	1.3	2.4	17.2	100.0
RR113	-	2,816	263	0700-0800	69.7	3.9	4.0	1.0	0.1	21.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERLIS**

SEPTEMBER 2014

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
RR101	-	16,438	1,621	1700-1800	73.3	2.2	4.1	0.3	2.1	17.8	100.0
RR102	-	4,974	634	1200-1300	48.9	3.1	3.9	0.2	1.2	42.7	100.0
RR103	-	16,931	1,870	0700-0800	66.8	2.8	3.0	0.2	0.7	26.6	100.0
RR104	-	24,705	3,109	0700-0800	69.1	2.5	2.2	0.4	0.4	25.4	100.0
RR105	29,526	25,598	2,258	1800-1900	68.4	5.9	3.1	0.3	1.5	20.7	100.0
RR106	-	14,312	1,322	0700-0800	66.5	6.0	5.1	1.5	1.7	19.2	100.0
RR107	-	6,522	609	1800-1900	63.4	9.4	3.4	0.7	2.1	21.0	100.0
RR108	-	22,328	2,766	1700-1800	65.2	4.6	2.3	0.1	0.7	27.2	100.0
RR109	-	8,067	1,078	0700-0800	58.4	3.6	3.7	1.0	0.3	32.9	100.0
RR110	-	11,546	1,256	0700-0800	61.6	6.5	7.1	0.4	2.1	22.4	100.0
RR111	33,009	29,593	2,904	1700-1800	65.8	3.4	2.6	0.4	0.4	27.4	100.0
RR112	-	18,443	2,043	1700-1800	78.6	4.4	2.2	0.3	2.5	12.0	100.0
RR113	-	3,325	307	1200-1300	73.1	3.1	2.6	0.5	0.0	20.8	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PERLIS**

AVERAGE 2014

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
RR101	15,925	1,761	68.6	2.6	4.1	0.3	2.6	21.8	A
RR102	4,381	585	47.5	4.2	4.8	0.2	0.9	42.4	A
RR103	15,889	1,874	64.6	2.9	2.9	0.3	0.6	28.6	E
RR104	23,572	2,841	69.3	2.4	2.2	0.3	0.4	25.3	A
RR105	25,092	2,259	68.1	5.3	3.4	0.3	1.7	21.1	A
RR106	14,367	1,397	63.9	5.9	4.4	1.6	1.6	22.4	D
RR107	6,136	568	60.9	9.8	3.5	0.9	2.0	22.9	A
RR108	22,811	2,556	64.8	4.3	2.2	0.2	0.6	27.8	A
RR109	6,561	716	3.4	3.0	0.9	0.3	29.2	786	A
RR110	10,864	1,117	65.9	5.4	5.3	0.6	1.3	21.6	A
RR111	28,776	2,708	64.8	4.9	2.4	0.4	0.4	27.1	A
RR112	16,450	1,772	73.0	5.1	4.0	0.8	2.5	14.6	A
RR113	3,071	285	71.4	3.5	3.3	0.7	0.0	21.1	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PERLIS**

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
RR101	12,479	14,289	13,637	14,558	14,573	15,198	15,422	16,728	17,063	15,925	2.83	0.83
RR102	3,809	3,937	4,121	4,450	3,782	4,418	8,309	8,967	5,430	4,381	5.71	0.30
RR103	12,815	13,611	13,159	14,689	14,181	14,855	19,892	14,730	13,216	15,889	1.97	0.22
RR104	19,512	24,966	25,612	29,308	27,854	30,944	19,528	25,887	25,886	23,572	0.54	0.01
RR105	17,644	19,859	21,018	20,769	21,321	21,758	23,234	25,577	26,155	25,092	3.90	0.91
RR106	12,396	12,255	12,686	13,281	13,422	13,316	14,296	14,625	13,042	14,367	1.63	0.64
RR107	4,598	4,939	4,597	4,678	4,465	4,739	4,752	5,617	5,941	6,136	3.03	0.62
RR108	21,998	22,936	24,325	23,159	22,018	21,992	20,466	23,430	20,570	22,811	-0.60	0.11
RR109	9,019	6,783	6,706	6,090	6,294	14,372	7,384	6,630	7,439	6,561	-0.50	0.00
RR110	10,376	11,471	9,071	8,526	10,264	11,419	11,627	11,461	10,183	10,864	1.08	0.10
RR111	24,400	24,587	26,017	26,042	25,847	27,311	27,300	28,853	28,269	28,776	1.92	0.92
RR112	-	7,188	6,986	8,409	8,551	10,798	13,026	13,627	14,422	16,450	11.45	0.96
RR113	-	4,184	3,188	2,975	3,032	4,067	3,400	3,784	3,240	3,071	-1.00	0.04

STATISTIC FOR YEAR 2014

STATE : **PERLIS**

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

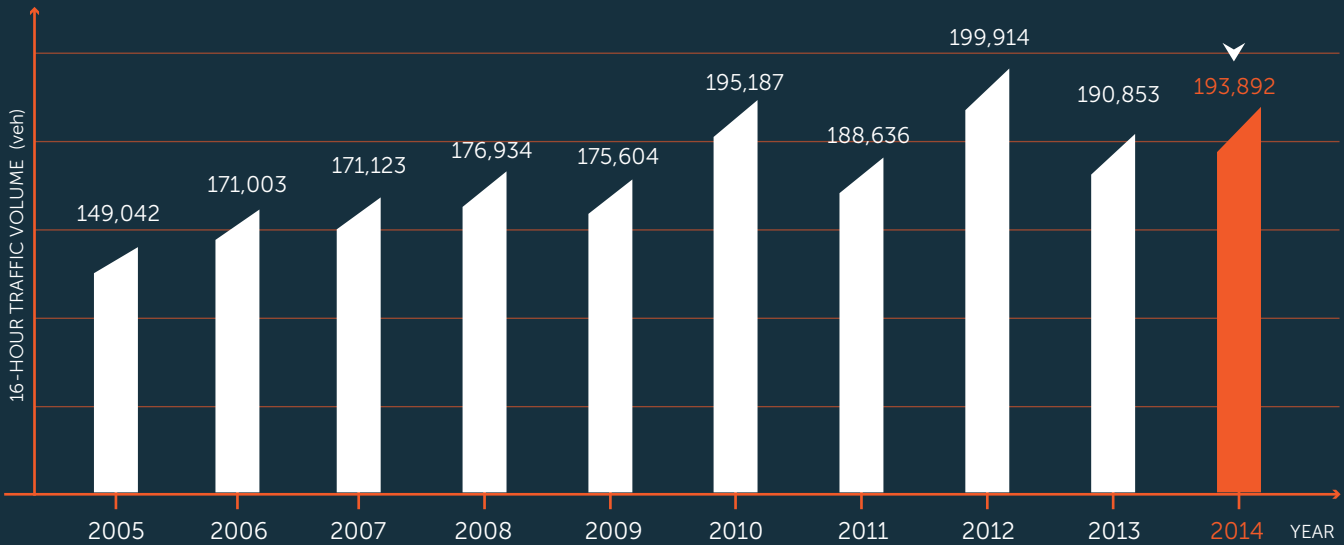


Figure 3.1-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Perlis



There are 13 census stations in Perlis. The 16-hour traffic volume documented since year 2005 to 2014 has seen an increase of 3,039 vehicles in Perlis. Pattern has seen a slight interval decrease of traffic volume in 2009, 2011, and 2013.

1.59%
INCREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

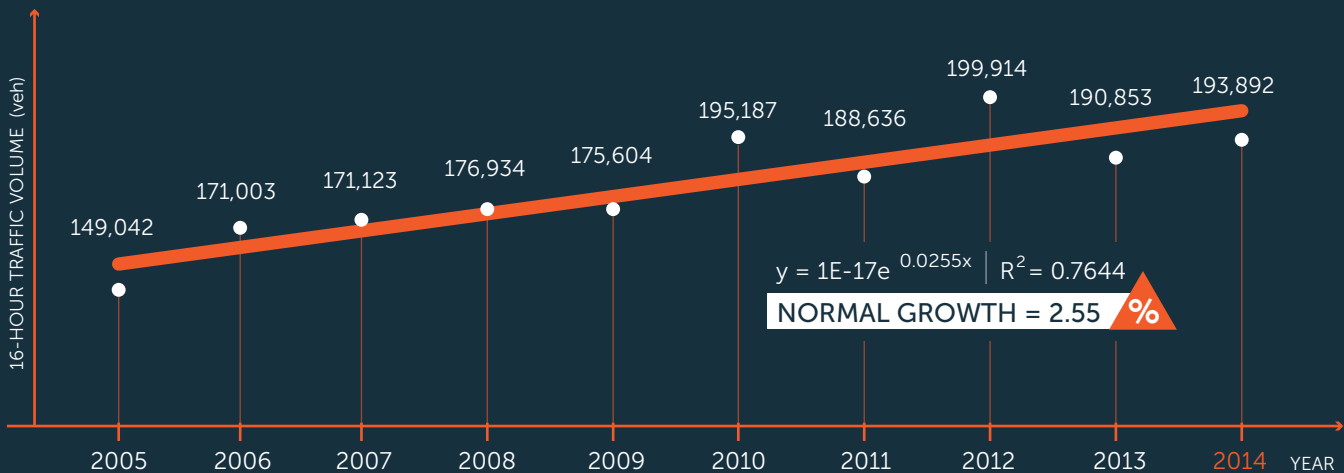


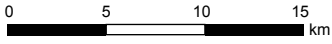
Figure 3.1-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Perlis

Traffic growth rate recorded for the state of Perlis is 2.55% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Perlis.

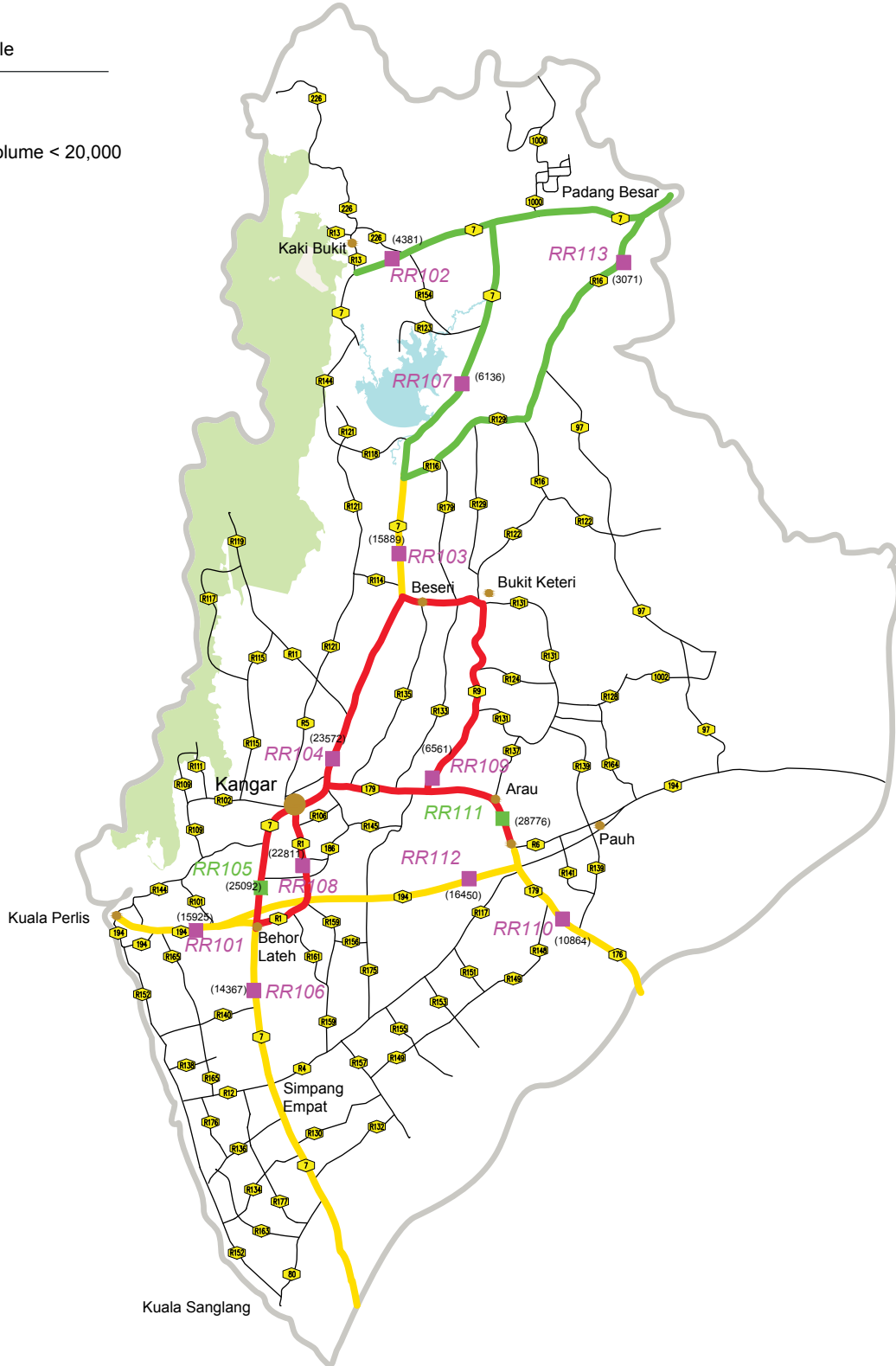
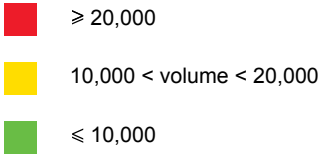
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **PERLIS**

LEGEND



Traffic Volume Scale







Jelapang Padi

KEDAH

DARUL AMAN

52 Census Stations

Road Length : **12,515.18 km***

Land Area : **9,500 km²****

Population : **1,890,098 people****

*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **KEDAH**

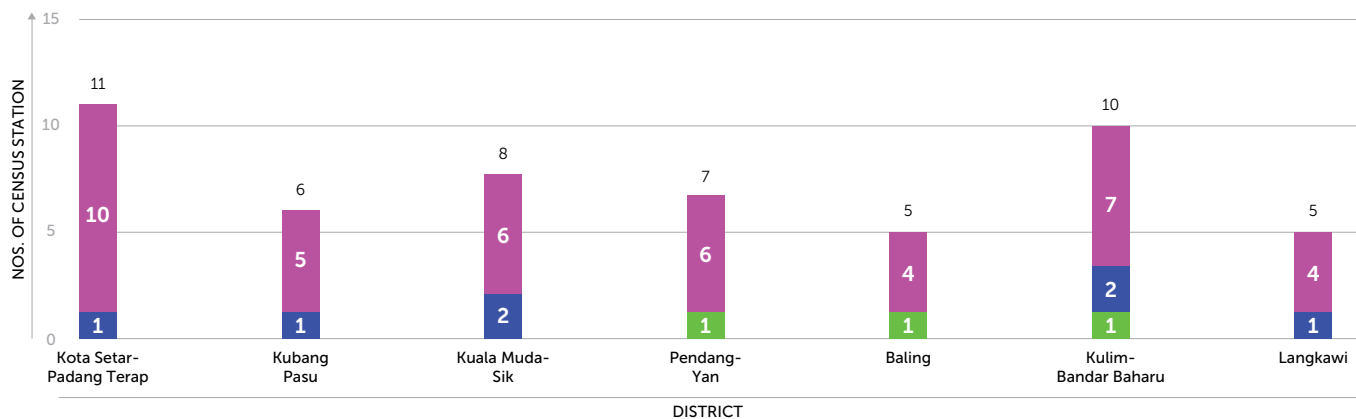


LEGEND



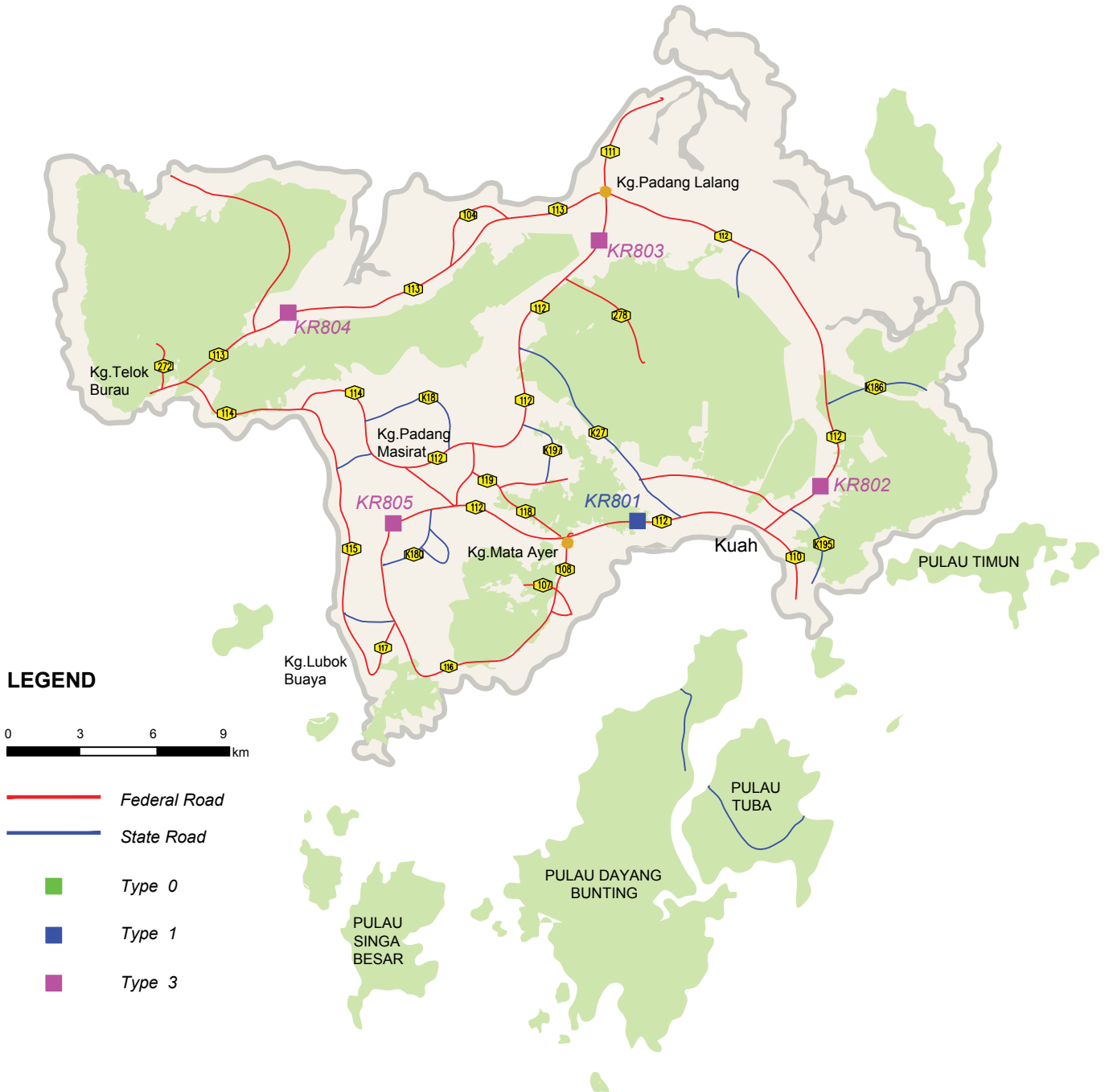
- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

DISTRIBUTION OF SURVEY STATIONS



TRAFFIC CENSUS STATION MAP

STATE : **KEDAH (LANGKAWI)**



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **KEDAH**

District : KOTA SETAR - PADANG TERAP

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
KR101	3	175	4.0	Langgar Road (Highway Bridge)	N : 6° 09' 02.5" E : 100° 24' 11.0"	Dual	4
KR102	3	175	12.0	Alor Star - Langgar - Pokok Sena	N : 6° 09' 03.0" E : 100° 27' 21.0"	Dual	4
KR103	3	K8	23.0	Alor Star - Pokok Sena - Kuala Nerang	N : 6° 10' 39.0" E : 100° 31' 49.0"	Single	2
KR104	3	175	27.0	Alor Star - Kg. Bukit Payong - Naka	N : 6° 09' 02.0" E : 100° 33' 24.0"	Single	2
KR105	3	78	4.0	Alor Star - Kuala Kedah	N : 6° 05' 46.0" E : 100° 20' 50.0"	Dual	4
KR106	3	78	7.0	Alor Star - Kuala Kedah	N : 6° 05' 47.0" E : 100° 18' 12.0"	Dual	4
KR107	3	255	5.0	West Alor Star Bypass	N : 6° 05' 38.0" E : 100° 21' 19.0"	Dual	4
KR108	1	255	3.0	Package LLM Expressway	N : 6° 08' 33.0" E : 100° 21' 22.0"	Dual	4
KR109	3	135	3.5	Alor Star - Pendang (Jalan Titi Hj. Idris)	N : 6° 07' 12.0" E : 100° 23' 37.0"	Single	2
KR110	3	7	8.0	Alor Star - Simpang Empat - Kangar	N : 6° 09' 51.0" E : 100° 18' 35.0"	Single	2
KR111	3	1	16.0	Alor Star - Guar Chempedak	N : 5° 58' 34.5" E : 100° 23' 57.0"	Single	2

District : KUBANG PASU

KR201	1	1	16.9	Alor Star - Jitra	N : 6° 13' 50.9" E : 100° 25' 10.2"	Dual	4
KR202	3	1	20.6	Alor Star - Changlun	N : 6° 16' 17.0" E : 100° 25' 11.6"	Dual	4
KR203	3	1	40.3	Jitra - Changlun	N : 6° 26' 35.9" E : 100° 25' 46.2"	Dual	4
KR204	3	176	20.6	Alor Star - Jitra - Kodiang	N : 6° 15' 59.8" E : 100° 25' 04.4"	Dual	4
KR205	3	176	27.4	Jitra - Kodiang	N : 6° 18' 01.8" E : 100° 21' 52.6"	Dual	4
KR206	3	K4	1.6	Jitra - Ayer Hitam	N : 6° 15' 41.8" E : 100° 24' 33.5"	Single	2

District : KUALA MUDA - SIK

KR401	1	1	70.8	Alor Star - Sungai Petani - Butterworth (Bumbong Lima)	N : 5° 34' 2.9" E : 100° 25' 41.5"	Single	2
KR402	1	1	53.1	Alor Star - Sungai Petani (Sungai Lalang)	N : 5° 41' 05.1" E : 100° 30' 34.9"	Single	2
KR403	3	1	7.0	Alor Star - Sungai Petani - Kuala Ketil (Econsave)	N : 5° 37' 13.6" E : 100° 32' 25.2"	Single	2
KR404	3	253	1.0	Bedong - Tanjung Dawai (UiTM Merbok)	N : 5° 43' 35.3" E : 100° 30' 37.0"	Single	2
KR405	3	175	36.2	Alor Star - Gurun - Jeniang	N : 5° 49' 06.2" E : 100° 29' 29.0"	Single	2
KR406	3	K17	64.4	Jeniang - Bukit Selambau	N : 5° 47' 37.4" E : 100° 37' 09.8"	Dual	4
KR407	3	K15	4.0	From Junction Batu Lima - Parit Panjang road	N : 5° 46' 18.7" E : 100° 42' 18.9"	Single	2
KR408	3	175	66.8	Alor Star - Jeniang - Sik	N : 5° 47' 56.1" E : 100° 42' 32.2"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **KEDAH**

District : PENDANG - YAN

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
KR501	0	1	29.0	Alor Star - Sungai Petani (Bt. 18 Guar Chempedak)	N : 5° 52' 35.7" E : 100° 26' 57.5"	Single	2
KR502	3	K146	38.6	Alor Star - Guar Chempedak - Yan (in front of Sek. Men. Agama Yan)	N : 5° 49' 58.1" E : 100° 23' 54.1"	Single	2
KR503	3	K1	33.8	Alor Star - Kuala Kedah - Yan (Sedaka)	N : 5° 52' 13.2" E : 100° 22' 53.8"	Single	2
KR504	3	K133	5.0	Alor Star - Kota Sarang Semut - Pendang - Titi Hj. Idris	N : 5° 58' 22.0" E : 100° 26' 36.9"	Single	2
KR505	3	K151	4.0	Pendang - Sg. Tiang (Cegar)	N : 5° 58' 21.4" E : 100° 30' 38.8"	Single	2
KR506	3	K147	10.0	Pendang - Jenun - Pdg. Lembu (Sek. Keb. Jenun)	N : 5° 54' 23.3" E : 100° 28' 36.5"	Single	2
KR507	3	K128	9.0	Pendang - Tobiar - Kubur Panjang (in front of Maktab Mahmud)	N : 6° 03' 23.5" E : 100° 30' 12.6"	Single	2

District : BALING

KR601	0	67	23.9	S. Petani - Baling (Before K722 Junction)	N : 5° 36' 05.1" E : 100° 41' 03.7"	Single	2
KR602	3	67	51.5	S. Petani - Baling (in front of Sek. Keb. Pulau)	N : 5° 39' 24.9" E : 100° 53' 09.5"	Single	2
KR603	3	76	1.0	Gerik Road - Pkln. Hulu - Baling (0.3km from Baling Roundabout)	N : 5° 40' 28.1" E : 100° 55' 19.3"	Single	2
KR604	3	K15	1.3	Bt. 5 - Parit Panjang - Bt. 42 (0.3km from Parit Panjang Roundabout)	N : 5° 42' 17.0" E : 100° 44' 50.9"	Single	2
KR605	3	4	46.0	Kulim - Baling - Gerik	N : 5° 33' 56.7" E : 100° 43' 14.8"	Single	2

District : KULIM - BANDAR BAHARU

KR701	3	254	5.5	Kulim - Bukit Mertajam	N : 5° 21' 14.7" E : 100° 32' 08.1"	Dual	4
KR702	3	254	4.7	Kulim - Bukit Mertajam	N : 5° 21' 30.4" E : 100° 32' 36.0"	Dual	4
KR703	0	169	30.5	Kulim - Junjong (Petronas)	N : 5° 23' 29.8" E : 100° 34' 19.0"	Dual	4
KR704	3	136	56.0	Kulim - Mahang (Hospital)	N : 5° 26' 21.1" E : 100° 32' 13.9"	Single	2
KR705	1	136	49.0	Kulim - Lunas - Pdg. Serai - Merbau Pulas	N : 5° 24' 03.7" E : 100° 33' 20.8"	Dual	4
KR706	3	136	45.5	Kulim - Lunas - Pdg. Serai - Merbau Pulas	N : 5° 22' 05.9" E : 100° 34' 51.3"	Dual	4
KR707	3	K145	5.0	Kulim - Junjong	N : 5° 20' 16.0" E : 100° 32' 15.4"	Single	2
KR708	3	171	5.0	Serdang - Selama	N : 5° 13' 28.1" E : 100° 37' 24.9"	Single	2
KR709	1	136	74.6	Kulim - Lunas - Pdg. Serai - Merbau Pulas	N : 5° 31' 51.6" E : 100° 37' 24.9"	Single	2
KR710	3	4	24.2	Jalan Kulim - Lunas - Sg. Karangan - Baling	N : 5° 26' 46.0" E : 100° 34' 09.4"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **KEDAH**

District : **LANGKAWI**

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
KR801	1	112	4.5	Pekan Kuah - Padang Matsirat	N : 6° 19' 30.9" E : 99° 48' 29.1"	Dual	4
KR802	3	112	1.5	Pekan Kuah - Tanjung Rhu	N : 6° 20' 06.9" E : 99° 51' 51.1"	Single	2
KR803	3	112	1.0	Padang Lalang - Ulu Melaka	N : 6° 25' 15.8" E : 99° 48' 12.3"	Single	2
KR804	3	113	1.0	Kampung Kok - Kampung Ewa	N : 6° 23' 15.2" E : 99° 42' 42.2"	Single	2
KR805	3	116	1.0	Simpang Kedawang - Lapangan Terbang	N : 6° 19' 36.9" E : 99° 44' 12.1"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KEDAH**

MARCH 2014

District : KOTA SETAR - PADANG TERAP

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
KR101	-	54,111	5,532	0700-0800	58.2	9.5	3.1	2.1	0.3	26.8	100.0
KR102	-	23,747	2,022	1700-1800	57.9	3.7	6.4	1.3	0.3	30.3	100.0
KR103	-	18,829	1,704	0700-0800	51.9	2.9	2.9	1.2	0.4	40.6	100.0
KR104	-	4,981	426	1400-1500	50.7	6.8	5.0	1.4	0.5	35.7	100.0
KR105	-	38,420	3,489	0700-0800	63.2	6.7	2.9	1.4	0.2	25.7	100.0
KR106	-	24,411	1,939	0700-0800	51.0	10.7	3.0	1.5	0.2	33.6	100.0
KR107	-	43,592	3,628	1800-1900	62.4	10.0	4.3	4.1	0.6	18.6	100.0
KR108	-	44,834	3,587	1700-1800	60.9	3.1	2.6	0.4	1.7	31.2	100.0
KR109	-	26,967	2,347	1800-1900	51.6	7.5	2.1	0.6	0.1	38.1	100.0
KR110	-	20,934	1,845	1800-1900	58.9	7.0	5.5	2.8	0.8	25.0	100.0
KR111	-	18,782	1,574	1700-1800	49.5	10.2	5.9	6.4	0.7	27.2	100.0

District : KUBANG PASU

KR201	-	40,158	3,226	1800-1900	62.1	4.8	3.3	0.4	0.3	29.0	100.0
KR202	-	39,906	5,267	0700-0800	59.7	3.1	1.8	0.7	0.2	34.5	100.0
KR203	-	21,447	2,147	0700-0800	64.4	4.2	3.7	6.1	1.1	20.6	100.0
KR204	-	17,844	2,757	0700-0800	56.1	5.1	3.8	0.6	0.4	34.1	100.0
KR205	-	9,835	1,014	0900-1000	53.0	7.8	4.7	0.6	0.3	33.6	100.0
KR206	-	8,706	791	0700-0800	44.8	7.6	9.7	0.8	0.0	37.0	100.0

District : KUALA MUDA - SIK

KR401	-	24,113	2,794	1800-1900	61.7	7.1	4.9	0.9	0.4	25.1	100.0
KR402	-	43,653	3,584	0700-0800	56.0	5.6	6.4	1.7	0.5	29.8	100.0
KR403	-	27,329	2,492	1800-1900	63.5	6.9	4.7	2.0	0.5	22.4	100.0
KR404	-	13,497	1,549	0700-0800	43.8	6.4	5.8	2.2	0.5	41.3	100.0
KR405	-	23,605	2,546	0700-0800	54.2	7.4	5.4	3.1	0.5	29.4	100.0
KR406	-	5,073	411	0700-0800	45.9	13.9	11.6	2.5	0.5	25.5	100.0
KR407	-	7,823	715	0700-0800	46.5	8.9	6.3	1.9	1.2	35.2	100.0
KR408	-	9,366	994	1800-1900	49.7	8.4	4.5	2.4	0.7	34.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KEDAH**

MARCH 2014

District : **PENDANG - YAN**

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
KR501	21,154	18,687	1,546	1800-1900	52.4	6.0	6.3	5.3	0.6	29.3	100.0
KR502	-	9,036	1,047	0700-0800	50.4	8.5	3.3	1.4	0.1	36.2	100.0
KR503	-	5,417	547	1000-1100	49.4	7.0	5.7	1.9	0.2	35.8	100.0
KR504	-	9,592	877	1700-1800	50.4	4.0	8.6	3.0	0.4	33.7	100.0
KR505	-	8,992	763	1400-1500	41.6	5.6	7.6	2.9	0.3	42.0	100.0
KR506	-	7,014	2,810	0700-0800	25.3	4.3	2.5	0.8	0.1	67.1	100.0
KR507	-	5,861	675	1300-1400	37.7	11.8	7.5	7.3	0.1	35.6	100.0

District : **BALING**

KR601	13,153	12,129	1,008	0700-0800	50.5	9.2	5.5	1.5	1.3	32.1	100.0
KR602	-	24,223	2,033	1300-1400	57.8	8.6	1.5	0.4	0.7	31.0	100.0
KR603	-	11,214	985	1300-1400	47.7	10.2	2.7	0.6	1.1	37.6	100.0
KR604	-	7,619	1,098	1400-1500	35.7	7.7	3.2	0.5	0.3	52.6	100.0
KR605	-	9,385	914	1800-1900	60.2	13.5	5.7	3.9	0.7	16.0	100.0

District : **KULIM - BANDAR BAHARU**

KR701	-	34,014	3,590	1900-2000	60.5	7.6	2.9	0.7	0.3	28.1	100.0
KR702	-	54,451	6,283	0700-0800	58.8	3.5	3.5	1.3	0.5	32.4	100.0
KR703	27,001	24,544	2,579	0700-0800	67.3	3.1	1.8	0.4	0.5	27.0	100.0
KR704	-	14,308	1,701	0700-0800	50.6	9.0	6.7	1.0	1.0	31.8	100.0
KR705	-	39,700	6,004	1600-1700	54.0	3.8	2.7	0.7	0.5	38.2	100.0
KR706	-	18,731	2,987	0700-0800	48.6	6.9	4.0	1.1	0.6	38.7	100.0
KR707	-	16,011	1,942	0700-0800	57.4	5.2	5.8	1.4	0.8	29.5	100.0
KR708	-	4,463	422	0700-0800	40.6	12.4	10.9	4.1	1.9	30.1	100.0
KR709	-	10,109	984	0700-0800	46.0	8.8	9.4	4.6	1.8	29.3	100.0
KR710	-	18,109	2,997	0700-0800	55.7	5.6	7.9	6.1	0.9	23.9	100.0

District : **LANGKAWI**

KR801	-	30,411	2,472	1800-1900	57.9	9.5	5.1	1.4	0.6	25.5	100.0
KR802	-	14,381	1,201	1800-1900	49.9	5.4	5.5	1.2	0.6	37.3	100.0
KR803	-	9,904	1,138	0700-0800	38.9	3.8	6.1	1.8	0.5	48.8	100.0
KR804	-	3,760	327	1500-1600	44.3	4.7	6.7	4.4	0.5	39.4	100.0
KR805	-	18,187	1,632	1900-2000	44.3	4.2	7.5	1.6	0.5	41.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KEDAH**

SEPTEMBER 2014

District : KOTA SETAR - PADANG TERAP

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
KR101	-	55,156	4,837	0700-0800	62.5	8.1	3.2	2.0	0.3	23.9	100.0
KR102	-	27,427	3,047	0700-0800	45.7	15.9	5.1	1.3	0.4	31.7	100.0
KR103	-	16,749	1,518	1700-1800	44.1	9.2	4.4	1.2	0.4	40.6	100.0
KR104	-	4,976	442	1700-1800	42.8	13.1	7.0	1.5	0.3	35.2	100.0
KR105	-	39,000	4,126	0700-0800	64.6	6.7	2.3	1.6	0.3	24.6	100.0
KR106	-	25,982	2,179	1800-1900	50.5	10.7	3.9	1.5	0.3	33.2	100.0
KR107	-	46,688	4,010	1800-1900	59.4	11.9	4.5	4.6	0.2	19.3	100.0
KR108	-	45,393	4,747	1800-1900	61.8	5.4	2.0	0.3	1.5	28.9	100.0
KR109	-	27,340	2,600	1200-1300	50.1	5.2	0.9	0.2	0.1	43.6	100.0
KR110	-	21,823	1,929	0700-0800	55.3	8.2	5.7	2.8	0.8	27.2	100.0
KR111	-	30,283	2,426	0700-0800	56.8	7.0	3.4	1.8	1.5	29.5	100.0

District : KUBANG PASU

KR201	-	33,282	2,778	1700-1800	57.1	6.8	3.7	0.4	4.4	27.6	100.0
KR202	-	28,100	2,968	1800-1900	55.0	5.3	2.7	1.6	0.2	35.2	100.0
KR203	-	19,469	2,400	0700-0800	65.7	6.6	3.6	6.5	1.2	16.4	100.0
KR204	-	13,127	1,269	0700-0800	60.0	7.7	4.8	1.0	0.3	26.2	100.0
KR205	-	15,028	1,532	1700-1800	62.0	4.8	2.5	0.6	0.5	29.6	100.0
KR206	-	7,565	854	1800-1900	54.2	5.5	6.2	2.4	0.1	31.5	100.0

District : KUALA MUDA - SIK

KR401	-	23,230	2,108	0700-0800	61.4	7.9	4.6	0.9	0.3	24.9	100.0
KR402	-	47,477	4,998	0700-0800	61.0	5.4	4.9	2.0	0.5	26.2	100.0
KR403	-	25,800	2,693	1800-1900	59.4	9.2	4.5	1.8	0.6	24.5	100.0
KR404	-	13,749	1,546	0700-0800	45.9	7.9	3.9	2.8	0.7	38.8	100.0
KR405	-	23,311	2,720	0700-0800	58.1	7.9	4.5	2.3	0.3	26.8	100.0
KR406	-	4,010	412	1800-1900	42.5	11.3	14.7	4.0	1.0	26.5	100.0
KR407	-	8,610	741	1700-1800	44.4	8.9	7.0	2.0	1.3	36.4	100.0
KR408	-	9,382	1,006	1200-1300	55.4	7.2	4.4	1.1	1.0	30.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KEDAH**

SEPTEMBER 2014

District : **PENDANG - YAN**

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
KR501	19,010	16,906	1,523	1800-1900	55.8	7.6	6.7	3.9	0.6	25.3	100.0
KR502	-	9,840	878	0700-0800	55.1	8.3	3.6	1.1	0.1	31.8	100.0
KR503	-	7,013	575	1800-1900	50.7	8.1	5.3	2.1	0.3	33.6	100.0
KR504	-	9,609	851	0700-0800	48.6	5.8	5.8	3.3	0.4	36.2	100.0
KR505	-	9,942	831	1400-1500	45.3	6.9	7.0	3.0	0.2	37.6	100.0
KR506	-	5,301	639	0700-0800	39.9	5.0	2.9	0.9	0.0	51.3	100.0
KR507	-	6,892	883	0700-0800	37.7	10.5	5.8	8.0	0.1	37.8	100.0

District : **BALING**

KR601	12,632	11,485	1,062	1800-1900	54.8	7.3	5.0	1.0	1.3	30.6	100.0
KR602	-	20,961	2,275	1700-1800	55.4	7.7	3.8	0.8	0.8	31.6	100.0
KR603	-	7,784	706	0700-0800	49.5	9.4	2.9	1.3	0.8	36.0	100.0
KR604	-	7,541	1,052	0800-0900	47.7	9.8	2.2	0.9	0.5	38.9	100.0
KR605	-	8,832	935	1800-1900	64.1	6.4	5.4	4.5	0.8	18.8	100.0

District : **KULIM - BANDAR BAHARU**

KR701	-	30,377	3,551	1800-1900	66.4	6.0	2.7	0.7	0.4	23.8	100.0
KR702	-	37,670	3,645	0700-0800	71.0	4.1	3.7	0.7	0.7	19.8	100.0
KR703	30,794	28,837	3,173	0700-0800	69.5	4.6	1.8	0.5	0.3	23.3	100.0
KR704	-	15,873	1,697	0700-0800	58.3	7.2	5.4	0.9	0.8	27.3	100.0
KR705	-	38,290	3,609	0700-0800	65.0	3.3	2.8	0.8	1.0	27.2	100.0
KR706	-	18,380	2,906	1600-1700	55.2	6.1	4.5	1.1	0.4	32.8	100.0
KR707	-	13,316	1,319	1500-1600	51.0	9.9	8.1	5.1	1.1	24.8	100.0
KR708	-	5,054	495	1700-1800	42.2	11.0	10.7	3.5	1.5	31.1	100.0
KR709	-	10,878	1,154	0700-0800	48.0	7.7	9.3	4.7	2.0	28.3	100.0
KR710	-	22,749	3,747	0700-0800	63.5	3.4	5.9	5.4	1.2	20.7	100.0

District : **LANGKAWI**

KR801	-	31,607	2,746	1700-1800	64.6	3.7	5.7	1.0	0.5	24.5	100.0
KR802	-	14,059	1,193	1400-1500	46.5	9.4	5.9	1.7	0.5	35.9	100.0
KR803	-	9,930	923	0700-0800	36.1	7.4	5.5	3.1	0.5	47.5	100.0
KR804	-	3,603	335	1700-1800	39.9	10.1	3.4	2.0	0.4	44.2	100.0
KR805	-	15,680	1,505	1700-1800	44.9	6.9	5.5	0.8	0.4	41.5	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **KEDAH**

AVERAGE 2014

District : KOTA SETAR - PADANG TERAP

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
KR101	54,634	5,185	60.4	8.8	3.1	2.1	0.3	25.4	F
KR102	25,587	2,535	51.8	9.8	5.7	1.3	0.4	31.0	A
KR103	17,789	1,611	48.0	6.1	3.7	1.2	0.4	40.6	D
KR104	4,979	434	46.7	10.0	6.0	1.4	0.4	35.4	A
KR105	38,710	3,808	63.9	6.7	2.6	1.5	0.3	25.1	C
KR106	25,197	2,059	50.8	10.7	3.4	1.5	0.2	33.4	A
KR107	45,140	3,819	60.9	10.9	4.4	4.4	0.4	19.0	D
KR108	45,114	4,167	61.4	4.3	2.3	0.4	1.6	30.1	C
KR109	27,154	2,474	50.8	6.3	1.5	0.4	0.1	40.8	F
KR110	21,379	1,887	57.1	7.6	5.6	2.8	0.8	26.1	F
KR111	24,533	2,000	53.2	8.6	4.7	4.1	1.1	28.4	F

District : KUBANG PASU

KR201	36,720	3,002	59.6	5.8	3.5	0.4	2.4	28.3	A
KR202	34,003	4,118	57.4	4.2	2.2	1.1	0.2	34.8	B
KR203	20,458	2,274	65.0	5.4	3.7	6.3	1.1	18.5	A
KR204	15,486	2,013	58.1	6.4	4.3	0.8	0.3	30.1	A
KR205	12,432	1,273	57.5	6.3	3.6	0.6	0.4	31.6	A
KR206	8,136	823	49.5	6.6	8.0	1.6	0.1	34.3	A

District : KUALA MUDA - SIK

KR401	23,672	2,451	61.5	7.5	4.7	0.9	0.4	25.0	F
KR402	45,565	4,291	58.5	5.5	5.6	1.9	0.5	28.0	F
KR403	26,565	2,593	61.5	8.0	4.6	1.9	0.5	23.5	F
KR404	13,623	1,548	44.9	7.1	4.9	2.5	0.6	40.1	E
KR405	23,458	2,633	56.2	7.7	4.9	2.7	0.4	28.1	F
KR406	4,542	412	44.2	12.6	13.1	3.3	0.8	26.0	A
KR407	8,217	728	45.4	8.9	6.6	2.0	1.2	35.8	A
KR408	9,374	1,000	52.6	7.8	4.5	1.7	0.8	32.6	A

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **KEDAH**

AVERAGE 2014

District : PENDANG - YAN

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
KR501	17,797	1,535	54.1	6.8	6.5	4.6	0.6	27.3	E
KR502	9,438	963	52.7	8.4	3.5	1.3	0.1	34.0	A
KR503	6,215	561	50.1	7.5	5.5	2.0	0.3	34.7	A
KR504	9,601	864	49.5	4.9	7.2	3.1	0.4	35.0	A
KR505	9,467	797	43.5	6.2	7.3	3.0	0.2	39.8	A
KR506	6,158	1,725	32.6	4.6	2.7	0.8	0.0	59.2	E
KR507	6,377	779	37.7	11.2	6.6	7.6	0.1	36.7	A

District : BALING

KR601	11,807	1,035	52.6	8.3	5.2	1.3	1.3	31.3	A
KR602	22,592	2,154	56.6	8.1	2.6	0.6	0.8	31.3	F
KR603	9,499	846	48.6	9.8	2.8	1.0	0.9	36.8	A
KR604	7,580	1,075	41.7	8.8	2.7	0.7	0.4	45.7	A
KR605	9,109	925	62.2	9.9	5.5	4.2	0.7	17.4	A

District : KULIM - BANDAR BAHARU

KR701	32,196	3,571	63.4	6.8	2.8	0.7	0.3	25.9	B
KR702	46,061	4,964	64.9	3.8	3.6	1.0	0.6	26.1	E
KR703	26,691	2,876	68.4	3.9	1.8	0.4	0.4	25.1	A
KR704	15,091	1,699	54.4	8.1	6.0	1.0	0.9	29.6	F
KR705	38,995	4,807	59.5	3.5	2.8	0.8	0.8	32.7	D
KR706	18,556	2,947	51.9	6.5	4.2	1.1	0.5	35.7	A
KR707	14,664	1,631	54.2	7.5	7.0	3.3	0.9	27.1	F
KR708	4,759	459	41.4	11.7	10.8	3.8	1.7	30.6	A
KR709	10,493	1,069	47.0	8.3	9.4	4.6	1.9	28.8	C
KR710	14,020	1,960	45.9	6.5	6.7	4.6	0.7	35.7	F

District : LANGKAWI

KR801	31,009	2,609	61.2	6.6	5.4	1.2	0.6	25.0	A
KR802	14,220	1,197	48.2	7.4	5.7	1.5	0.6	36.6	C
KR803	9,917	1,031	37.5	5.6	5.8	2.5	0.5	48.2	B
KR804	3,682	331	42.1	7.4	5.1	3.2	0.4	41.8	A
KR805	16,934	1,569	44.6	5.6	6.5	1.2	0.5	41.7	E

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **KEDAH**

District : KOTA SETAR - PADANG TERAP

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
KR101	32,357	32,031	39,774	48,051	47,342	42,729	46,813	42,213	46,801	54,634	4.54	0.64
KR102	11,922	23,373	22,060	23,222	22,512	26,056	22,888	23,422	29,246	25,587	5.36	0.46
KR103	10,179	13,087	17,988	17,076	13,741	14,362	19,143	14,737	21,353	17,789	4.75	0.44
KR104	5,054	5,862	4,435	4,879	4,876	5,785	7,277	5,719	6,416	4,979	1.90	0.15
KR105	32,031	38,771	31,690	30,227	31,710	35,308	27,783	33,955	37,715	38,710	1.04	0.08
KR106	20,630	20,383	21,010	26,310	24,987	21,887	21,717	24,217	25,894	25,197	2.11	0.41
KR107	37,792	35,747	36,560	30,201	33,415	39,139	38,074	41,811	46,195	45,140	2.98	0.48
KR108	40,723	38,604	40,960	40,252	41,077	43,602	45,001	45,944	44,954	45,114	1.79	0.80
KR109	25,068	25,707	26,928	33,926	28,343	33,589	26,744	32,255	28,764	27,154	1.13	0.10
KR110	25,780	34,121	31,575	31,067	28,433	28,137	23,023	24,145	23,108	21,379	-4.00	0.61
KR111	26,662	44,706	29,060	20,024	23,290	24,572	24,310	21,367	18,226	24,533	-4.80	0.35

District : KUBANG PASU

KR201	25,767	28,644	30,704	29,717	28,501	30,253	28,098	34,230	36,690	36,720	3.25	0.69
KR202	32,409	37,853	37,093	51,314	34,715	30,402	32,311	42,822	47,474	34,003	0.74	0.02
KR203	23,121	17,898	23,135	25,426	26,608	21,873	21,549	22,093	25,439	20,458	0.26	0.00
KR204	8,847	12,211	15,071	13,521	14,204	12,841	14,174	18,542	18,806	15,486	5.54	0.60
KR205	12,106	15,491	21,550	16,419	16,949	18,328	17,803	22,273	15,186	12,432	0.35	0.00
KR206	6,235	7,386	7,557	8,289	12,630	5,318	7,708	6,797	15,761	8,136	3.69	0.12

District : KUALA MUDA - SIK

KR401	22,259	21,067	20,596	16,123	19,052	24,002	22,195	23,141	23,971	23,672	1.96	0.23
KR402	46,493	44,624	43,928	43,949	43,741	42,989	41,858	42,018	44,288	45,565	-0.40	0.12
KR403	24,714	20,386	23,429	22,722	26,231	23,337	22,551	24,494	27,266	26,565	1.68	0.33
KR404	9,192	9,316	10,957	11,624	12,162	13,942	13,483	13,291	13,715	13,623	4.72	0.82
KR405	16,743	18,254	17,255	18,631	19,097	20,697	21,254	20,640	21,416	23,458	3.35	0.91
KR406	3,166	3,145	2,296	2,834	3,392	4,295	4,511	4,578	4,820	4,542	6.86	0.68
KR407	5,088	5,070	5,616	5,257	5,869	8,082	8,134	7,324	7,862	8,217	6.27	0.81
KR408	8,492	7,861	8,477	8,088	8,861	8,631	10,055	9,649	9,458	9,374	2.10	0.63

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **KEDAH**

District : PENDANG - YAN

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
KR501	19,452	20,396	21,206	17,586	19,169	19,387	19,618	19,249	18,853	17,797	-0.90	0.24
KR502	7,082	7,242	8,419	7,151	8,979	9,539	9,261	7,551	9,584	9,438	2.93	0.48
KR503	4,162	4,856	6,529	5,846	6,338	6,612	6,229	5,982	7,111	6,215	3.68	0.49
KR504	7,239	6,530	8,523	7,246	10,173	9,157	6,569	9,193	9,813	9,601	3.26	0.34
KR505	8,837	9,366	11,388	10,737	8,429	8,516	7,201	7,678	8,394	9,467	-2.00	0.19
KR506	-	-	-	-	-	-	-	3,975	3,554	6,158	21.88	0.57
KR507	-	-	-	-	-	-	-	5,631	5,552	6,377	6.22	0.67

District : BALING

KR601	9,006	10,007	10,470	10,119	10,675	10,707	11,404	10,718	12,104	11,807	2.57	0.82
KR602	18,768	20,629	20,412	21,386	22,286	22,612	18,731	38,641	21,934	22,592	2.97	0.19
KR603	10,111	9,269	8,622	8,491	8,287	9,122	9,245	9,353	11,005	9,499	0.85	0.09
KR604	5,099	5,063	4,686	2,876	5,966	6,265	6,248	6,701	7,569	7,580	6.39	0.46
KR605	-	4,916	5,452	5,745	6,717	7,277	7,926	10,322	9,864	9,109	9.30	0.91

District : KULIM - BANDAR BAHARU

KR701	26,663	26,075	23,848	25,051	31,792	32,514	28,866	28,326	31,797	32,196	2.66	0.50
KR702	30,313	38,973	37,569	36,922	37,711	31,213	34,851	41,465	40,665	46,061	2.54	0.37
KR703	22,094	21,580	21,918	25,013	28,158	30,188	27,994	30,128	30,948	26,691	3.77	0.66
KR704	11,347	10,950	11,457	11,409	13,135	13,728	14,695	14,007	14,474	15,091	3.83	0.88
KR705	33,194	35,126	36,617	33,132	36,056	32,223	35,762	38,518	38,560	38,995	1.50	0.44
KR706	8,796	11,033	10,175	11,204	14,030	16,113	16,446	15,548	17,987	18,556	8.21	0.91
KR707	10,244	13,076	11,274	12,456	13,810	13,935	14,510	14,422	16,186	14,664	3.89	0.75
KR708	3,402	3,729	3,778	6,125	4,289	4,298	4,295	4,530	4,851	4,759	2.85	0.28
KR709	8,392	8,682	7,904	8,095	17,090	8,486	9,479	9,896	10,458	10,493	2.55	0.12
KR710	-	13,508	13,552	14,426	17,644	15,148	16,853	14,529	15,544	14,020	0.88	0.07

District : LANGKAWI

KR801	16,560	16,323	20,405	20,936	22,049	22,918	24,412	25,641	26,422	31,009	6.46	0.95
KR802	12,186	9,072	10,164	10,561	11,659	12,051	11,346	13,376	13,420	14,220	3.49	0.58
KR803	7,663	7,079	7,044	7,726	7,873	9,611	8,454	9,358	11,272	9,917	4.53	0.76
KR804	2,353	2,430	3,003	2,729	2,890	3,095	3,148	12,722	9,638	3,682	12.97	0.45
KR805	9,596	10,081	11,593	12,322	11,901	12,471	13,837	14,135	15,773	16,934	5.84	0.96

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

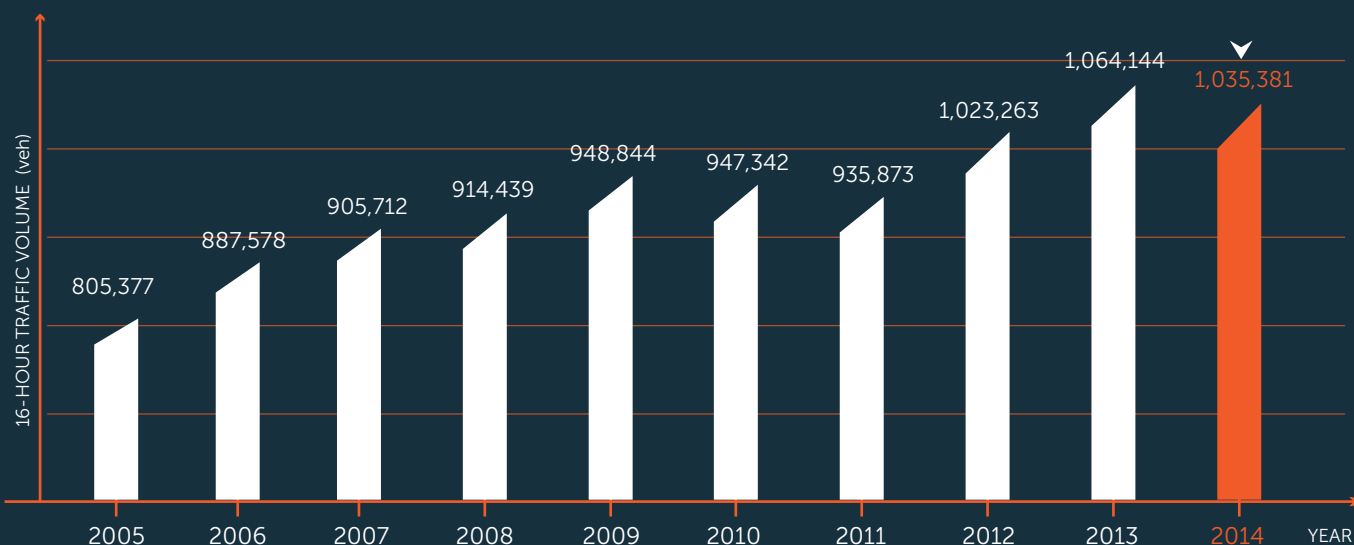


Figure 3.2-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Kedah



There are 52 census stations in Kedah. The 16-hour traffic volume documented since year 2005 shows steady growth, reaching its peak in 2013. For 2014, there was a drop of 2.70% equivalent to 28,763 vehicles.

-2.70%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

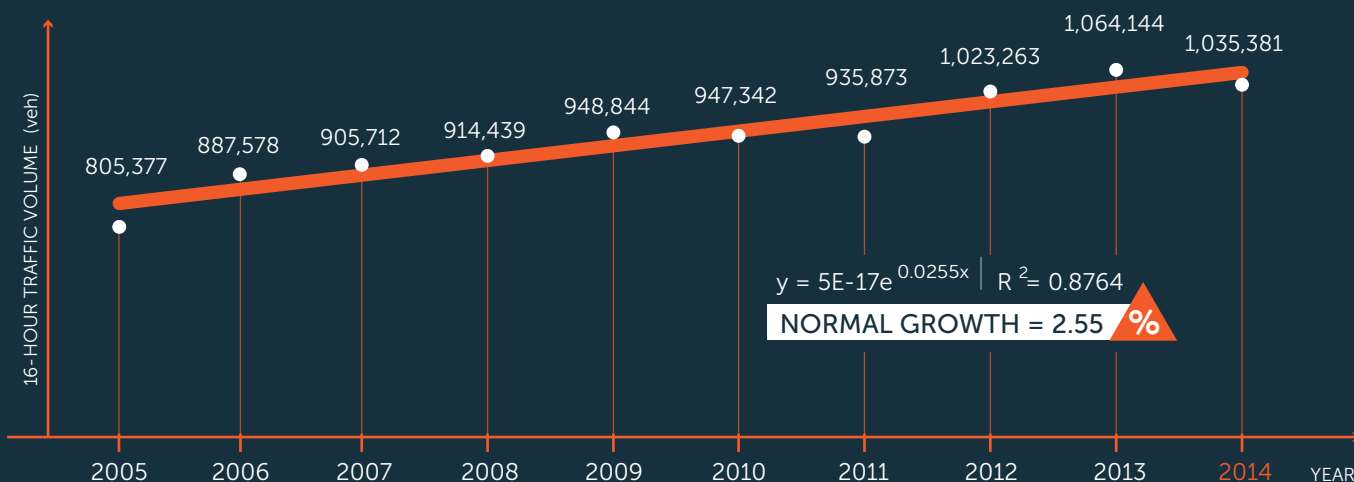


Figure 3.2-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Kedah

Traffic growth rate recorded for the state of Kedah is 2.55% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Kedah.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **KEDAH**



LEGEND

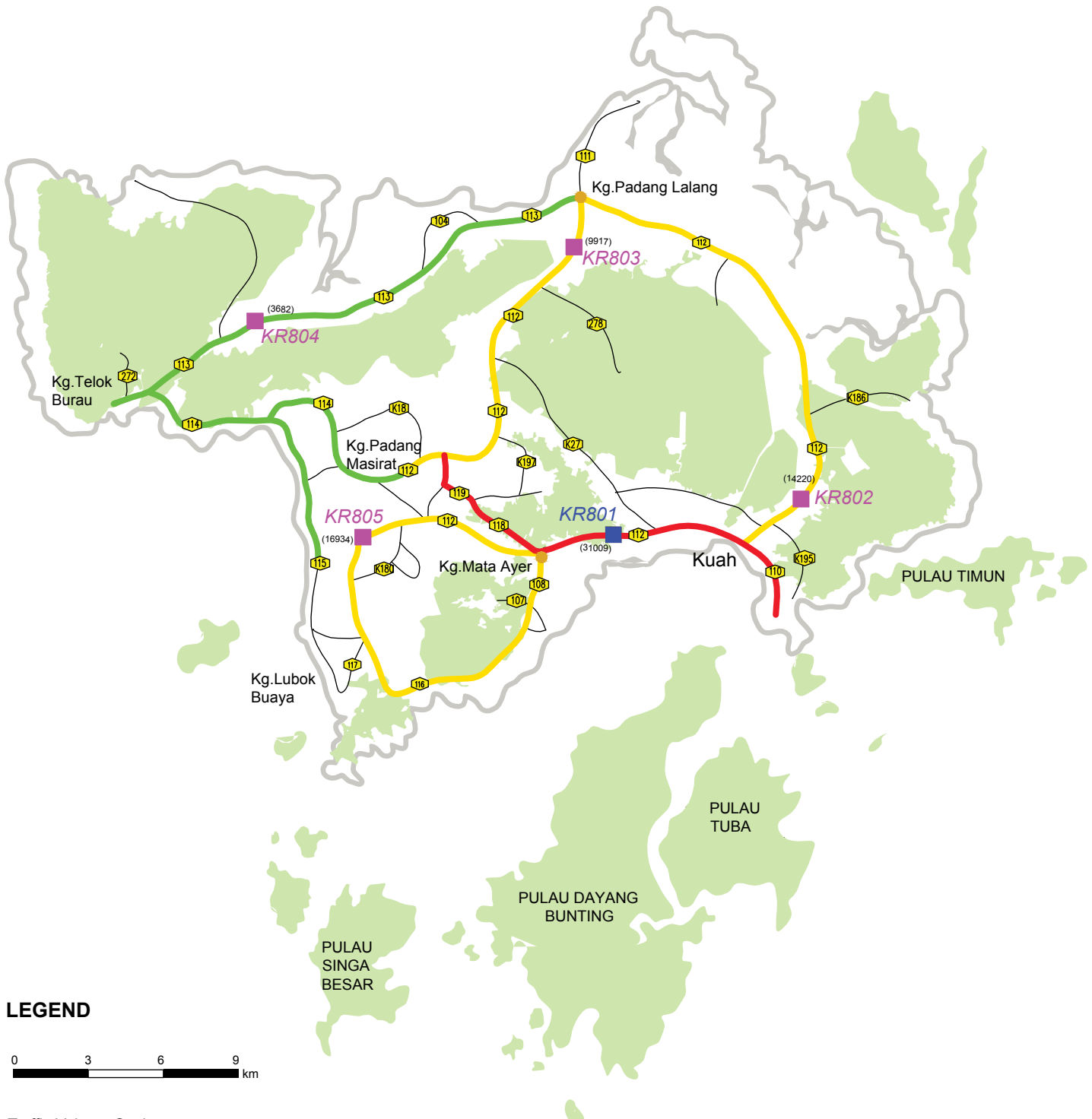


Traffic Volume Scale

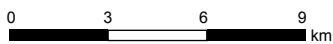
- ≥ 20,000
- 10,000 < volume < 20,000
- ≤ 10,000

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **KEDAH (LANGKAWI)**



LEGEND



Traffic Volume Scale

- ≥ 20,000
- 10,000 < volume < 20,000
- ≤ 10,000





Penang Hill

PULAU PINANG

PULAU MUTIARA

26 Census Stations

Road Length : 4,248.62 km*

Land Area : 1,048 km²**

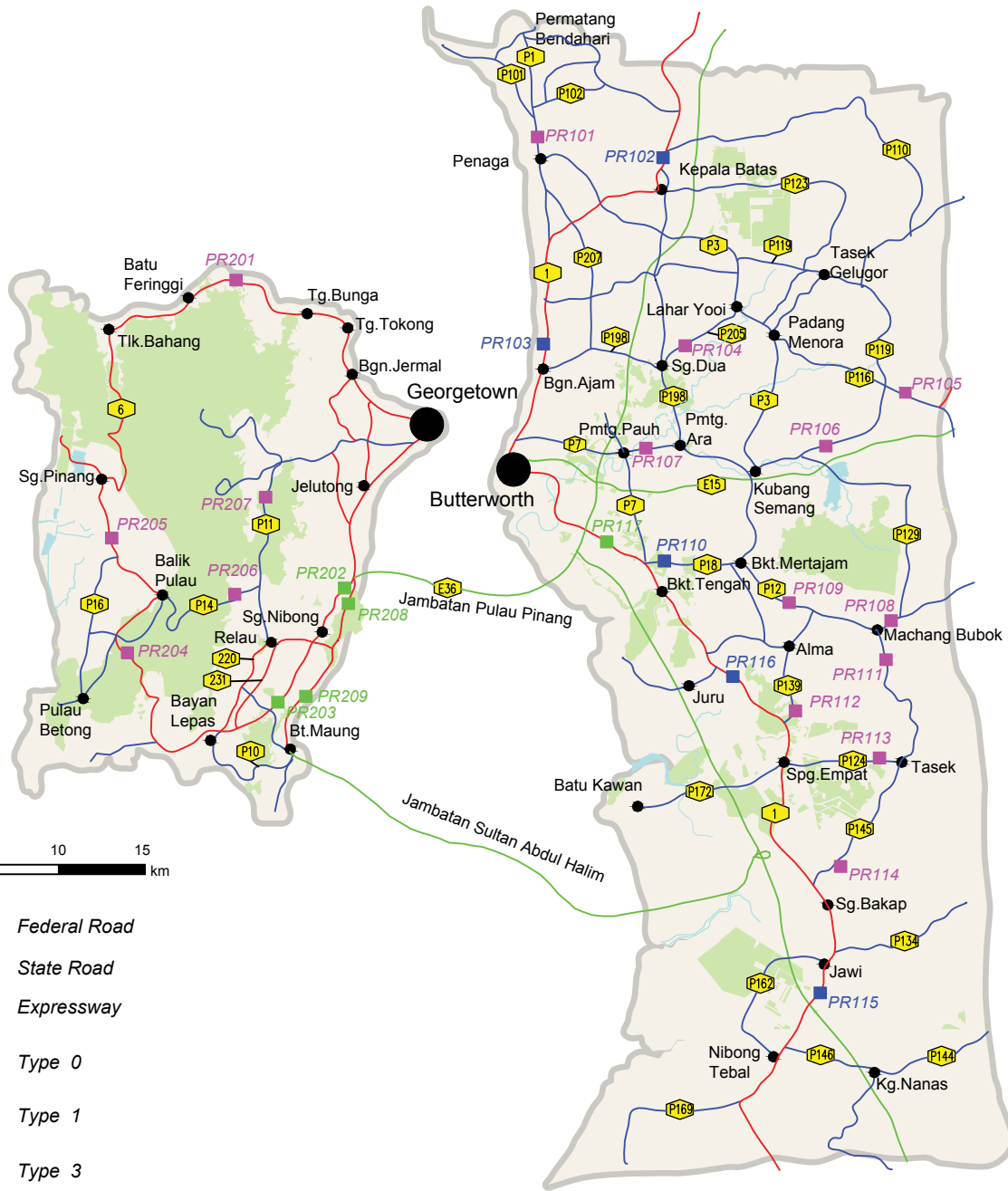
Population : 1,520,143 people**

*Source : Road Facilities Maintenance Division, JKR Malaysia

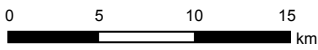
**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **PULAU PINANG**

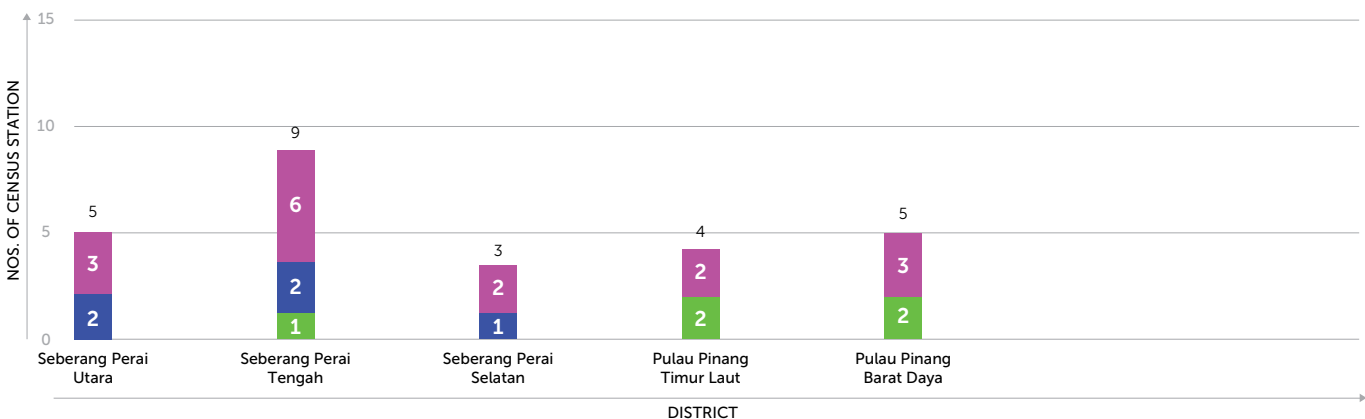


LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PULAU PINANG**

District : SEBERANG PERAI UTARA

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
PR101	3	P1	12.9	Titi Mukim - Permatang Bendahari	N : 5° 30' 14.0" E : 100° 23' 3.4"	Single	2
PR102	1	1	19.0	Butterworth - Kepala Batas - Sungai Petani	N : 5° 31' 22.1" E : 100° 25' 38.0"	Single	2
PR103	1	1	8.1	Butterworth - Bagan Ajam - Telok Ayer Tawar	N : 5° 28' 30.9" E : 100° 22' 59.0"	Single	2
PR104	3	P198	12.1	Butterworth - Sungai Dua - Lahar Yoi	N : 5° 27' 17.4" E : 100° 26' 26.0"	Single	2
PR105	3	P118	25.4	100m from Ara Kuda - Lunas junction	N : 5° 26' 15.5" E : 100° 30' 50.7"	Single	2

District : SEBERANG PERAI TENGAH

PR106	3	P119	21.7	Butterworth - Kubang Ulu - Ara Kuda	N : 5° 28' 05.2" E : 100° 30' 50.6"	Single	2
PR107	3	P188	8.1	Butterworth - Permatang Pauh - Kubang Semang	N : 5° 24' 37.9" E : 100° 24' 50.8"	Single	2
PR108	3	254	20.9	Butterworth - Bukit Mertajam - Kulim	N : 5° 21' 21.1" E : 100° 28' 04.9"	Single	2
PR109	3	254	15.8	Butterworth - Bukit Mertajam - Kulim	N : 5° 20' 37.3" E : 100° 31' 04.9"	Single	2
PR110	1	254	9.7	Butterworth - Bukit Mertajam	N : 5° 21' 52.8" E : 100° 26' 04.3"	Single	2
PR111	3	P143	20.9	B' worth - Bukit Mertajam - Junjong (through Machang Bubok - Tasek)	N : 5° 19' 47.3" E : 100° 30' 55.5"	Single	2
PR112	3	P139	3.2	From junction to Route 1 (Jalan Rozhan)	N : 5° 20' 05.9" E : 100° 28' 56.3"	Single	2
PR116	1	1	16.9	Butterworth - Taiping	N : 5° 19' 07.2" E : 100° 27' 30.6"	Single	2
PR117	0	1	8.1	Butterworth - Taiping (through Prai)	N : 5° 22' 11.4" E : 100° 24' 56.0"	Dual	4

District : SEBERANG PERAI SELATAN

PR113	3	P124	24.2	Butterworth - Simpang Empat - Tasek	N : 5° 17' 06.6" E : 100° 29' 46.1"	Dual	4
PR114	3	P145	30.6	Butterworth - Tasek - Val D'or	N : 5° 14' 33.9" E : 100° 29' 46.5"	Single	2
PR115	1	1	32.2	Butterworth - Taiping	N : 5° 11' 41.1" E : 100° 29' 31.0"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PULAU PINANG**

District : PULAU PINANG TIMUR LAUT

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
PR201	3	6	11.1	George Town - Telok Bahang (Jalan Keliling Pulau)	N : 5° 27' 56.1" E : 100° 16' 50.8"	Dual	4
PR202	0	6	65.5	George Town - Bayan Lepas - Gelugor (Jalan Keliling Pulau)	N : 5° 21' 26.3" E : 100° 18' 36.8"	Dual	4
PR207	3	P11	9.7	Paya Terubong - Ayer Hitam	N : 5° 23' 17.7" E : 100° 16' 28.9"	Single	2
PR208	0	3113	0.5	Lebuhraya Lim Cheong Eu	N : 5° 20' 41.3" E : 100° 18' 29.5"	Dual	6

District : PULAU PINANG BARAT DAYA

PR203	0	6	57.2	George Town - Bayan Lepas - Gelugor	N : 5° 17' 53.4" E : 100° 16' 13.0"	Dual	6
PR204	3	6	45.1	George Town - Balik Pulau - Teluk Kumbar (Jalan Keliling Pulau)	N : 5° 19' 56.4" E : 100° 13' 01.2"	Single	2
PR205	3	6	38.6	George Town - Telok Bahang - Balik Pulau (Jalan Keliling Pulau)	N : 5° 21' 55.0" E : 100° 13' 00.5"	Single	2
PR206	3	P14	16.9	Jalan Tun Saadon	N : 5° 21' 00.4" E : 100° 15' 08.9"	Single	2
PR209	0	3113	7.0	Lebuhraya Bayan Lepas (Georgetown - Batu Maung)	N : 5° 19' 02.6" E : 100° 18' 02.6"	Dual	6

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PULAU PINANG**

MARCH 2014

District : SEBERANG PERAI UTARA

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
PR101	-	8,115	1,330	0700-0800	45.0	2.8	1.9	0.6	1.0	48.7	100.0
PR102	-	19,638	1,803	1800-1900	56.0	3.1	3.7	0.9	0.6	35.8	100.0
PR103	-	34,922	3,093	1800-1900	58.1	2.4	2.0	0.6	0.7	36.2	100.0
PR104	-	26,901	3,771	0700-0800	47.4	3.3	5.1	1.5	1.2	41.5	100.0
PR105	-	15,131	2,256	0700-0800	55.6	3.6	5.9	2.5	0.8	31.6	100.0

District : SEBERANG PERAI TENGAH

PR106	-	8,613	936	0700-0800	50.1	7.6	6.9	4.3	0.8	30.2	100.0
PR107	-	17,850	2,321	0700-0800	48.1	4.6	3.8	3.3	0.3	39.9	100.0
PR108	-	43,448	4,284	1700-1800	62.1	3.7	2.1	1.1	0.3	30.8	100.0
PR109	-	47,766	4,007	0700-0800	67.9	3.6	1.2	0.4	0.4	26.5	100.0
PR110	-	42,795	3,829	1400-1500	64.1	3.1	3.1	0.4	0.7	28.6	100.0
PR111	-	4,366	507	1800-1900	55.5	5.1	3.0	1.3	0.1	35.0	100.0
PR112	-	37,097	3,347	2000-2100	67.5	5.1	2.4	1.6	0.5	22.9	100.0
PR116	-	46,472	4,008	1800-1900	55.9	6.0	3.1	1.8	0.8	32.4	100.0
PR117	201,679	183,009	15,949	1800-1900	65.1	6.4	4.0	1.1	0.5	22.9	100.0

District : SEBERANG PERAI SELATAN

PR113	-	24,728	2,220	0700-0800	42.3	7.9	7.8	2.2	0.3	39.5	100.0
PR114	-	10,283	1,188	1700-1800	44.5	7.0	21.4	6.9	0.7	19.5	100.0
PR115	-	43,450	3,580	0700-0800	55.3	6.5	5.9	2.1	0.6	29.5	100.0

District : PULAU PINANG TIMUR LAUT

PR201	-	27,101	2,863	0700-0800	64.9	3.4	2.7	0.3	1.2	27.5	100.0
PR202	81,012	71,021	7,366	1800-1900	58.0	2.4	1.8	0.3	1.0	36.5	100.0
PR207	-	25,947	2,639	1800-1900	51.2	3.7	2.2	0.1	1.3	41.5	100.0
PR208	103,648	91,672	7,677	1800-1900	72.2	3.4	2.6	0.6	0.8	20.5	100.0

District : PULAU PINANG BARAT DAYA

PR203	69,214	61,541	6,120	0600-0700	55.2	1.5	3.1	0.5	1.1	38.7	100.0
PR204	-	12,916	1,684	0600-0700	40.1	3.8	4.4	0.5	2.9	48.3	100.0
PR205	-	8,873	997	0700-0800	42.4	3.4	4.1	0.3	1.1	48.7	100.0
PR206	-	11,841	1,722	0700-0800	46.2	4.0	1.5	0.5	1.1	46.7	100.0
PR209	69,960	63,510	7,068	1800-1900	63.8	4.3	3.6	0.8	1.2	26.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PULAU PINANG**

SEPTEMBER 2014

District : SEBERANG PERAI UTARA

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
PR101	-	9,247	1,089	1800-1900	47.4	2.1	2.4	0.4	1.1	46.5	100.0
PR102	-	19,268	1,599	1700-1800	54.1	3.3	4.0	1.1	0.7	36.9	100.0
PR103	-	35,010	3,268	1800-1900	58.4	2.2	1.9	0.5	0.6	36.4	100.0
PR104	-	28,087	3,288	0700-0800	51.1	3.5	4.9	2.2	0.8	37.4	100.0
PR105	-	12,861	1,484	0700-0800	53.0	6.0	5.4	2.2	0.6	32.7	100.0

District : SEBERANG PERAI TENGAH

PR106	-	10,514	1,151	1700-1800	41.2	5.4	4.2	2.9	1.4	44.9	100.0
PR107	-	10,054	1,372	0700-0800	42.0	10.9	9.8	2.5	0.7	34.0	100.0
PR108	-	56,513	5,270	1800-1900	60.9	8.6	2.7	1.0	0.5	26.4	100.0
PR109	-	58,205	6,374	1800-1900	61.7	9.3	3.0	0.9	0.3	24.8	100.0
PR110	-	44,682	3,409	1700-1800	57.6	6.1	2.6	0.7	0.7	32.3	100.0
PR111	-	4,667	530	0700-0800	48.6	10.7	5.7	1.6	0.2	33.2	100.0
PR112	-	41,618	3,379	2000-2100	63.6	9.8	3.4	1.5	0.4	21.4	100.0
PR116	-	50,704	4,406	0700-0800	56.3	7.4	5.2	1.7	0.7	28.7	100.0
PR117	159,343	140,389	11,915	0700-0800	71.7	7.8	1.9	1.2	0.4	17.1	100.0

District : SEBERANG PERAI SELATAN

PR113	-	30,356	2,500	1900-2000	40.1	9.7	7.2	2.8	0.6	39.7	100.0
PR114	-	10,275	1,168	0900-1000	45.3	6.7	11.1	12.9	0.6	23.4	100.0
PR115	-	45,047	3,645	1800-1900	55.4	6.0	6.7	2.8	0.6	28.5	100.0

District : PULAU PINANG TIMUR LAUT

PR201	-	29,737	6,601	1200-1300	69.4	3.8	3.4	0.2	1.2	22.1	100.0
PR202	82,866	73,048	7,003	1700-1800	62.2	2.0	1.4	0.2	0.8	33.3	100.0
PR207	-	29,404	3,154	1500-1600	54.0	4.1	2.3	0.3	2.0	37.3	100.0
PR208	103,755	92,830	9,041	1800-1900	72.7	2.5	3.5	0.6	0.9	19.8	100.0

District : PULAU PINANG BARAT DAYA

PR203	73,212	64,557	7,711	1800-1900	55.7	2.1	2.4	0.5	1.0	38.2	100.0
PR204	-	14,431	1,975	0600-0700	38.1	3.9	4.1	0.5	3.2	50.3	100.0
PR205	-	10,100	781	1000-1100	42.4	4.0	4.0	0.2	1.1	48.2	100.0
PR206	-	12,993	1,338	0700-0800	43.9	6.5	1.3	0.4	1.2	46.6	100.0
PR209	62,999	57,494	6,190	1800-1900	65.0	3.2	4.4	1.3	2.0	24.1	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PULAU PINANG**

AVERAGE 2014

District : SEBERANG PERAI UTARA

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
PR101	8,681	1,210	46.2	2.5	2.2	0.5	1.1	47.6	B
PR102	19,453	1,701	55.0	3.2	3.8	1.0	0.6	36.3	C
PR103	34,966	3,181	58.3	2.3	2.0	0.6	0.6	36.3	F
PR104	27,494	3,530	49.3	3.4	5.0	1.8	1.0	39.5	F
PR105	13,996	1,870	54.3	4.8	5.6	2.4	0.7	32.2	D

District : SEBERANG PERAI TENGAH

PR106	9,564	1,044	45.6	6.5	5.6	3.6	1.1	37.5	B
PR107	13,952	1,847	45.1	7.8	6.8	2.9	0.5	36.9	F
PR108	49,981	4,777	61.5	6.1	2.4	1.0	0.4	28.6	F
PR109	52,986	5,191	64.8	6.4	2.1	0.7	0.3	25.7	F
PR110	43,738	3,619	60.8	4.6	2.9	0.6	0.7	30.5	F
PR111	4,517	519	52.0	7.9	4.4	1.5	0.1	34.1	A
PR112	39,358	3,363	65.6	7.4	2.9	1.5	0.4	22.2	F
PR116	48,588	4,207	56.1	6.7	4.1	1.8	0.7	30.6	F
PR117	161,699	13,932	68.4	7.1	2.9	1.1	0.4	20.0	F

District : SEBERANG PERAI SELATAN

PR113	27,542	2,360	41.2	8.8	7.5	2.5	0.4	39.6	F
PR114	10,279	1,178	44.9	6.9	16.3	9.9	0.6	21.5	F
PR115	44,249	3,613	55.4	6.2	6.3	2.4	0.6	29.0	C

District : PULAU PINANG TIMUR LAUT

PR201	28,419	4,732	67.1	3.6	3.0	0.3	1.2	24.8	D
PR202	72,034	7,185	60.1	2.2	1.6	0.3	0.9	34.9	F
PR207	27,676	2,897	52.6	3.9	2.2	0.2	1.7	39.4	F
PR208	92,251	8,359	72.4	2.9	3.0	0.6	0.8	20.1	E

District : PULAU PINANG BARAT DAYA

PR203	63,049	6,916	55.4	1.8	2.7	0.5	1.1	38.4	B
PR204	13,674	1,830	39.1	3.8	4.3	0.5	3.0	49.3	F
PR205	9,487	889	42.4	3.7	4.0	0.3	1.1	48.4	A
PR206	12,417	1,530	45.0	5.3	1.4	0.5	1.2	46.7	C
PR209	60,502	6,629	64.4	3.7	4.0	1.0	1.6	25.3	C

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PULAU PINANG**

District : SEBERANG PERAI UTARA

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
PR101	5,504	5,709	6,494	7,616	7,485	7,187	6,652	7,650	7,432	8,681	3.83	0.68
PR102	18,511	16,858	18,017	18,037	18,035	20,746	20,478	20,738	21,200	19,453	1.98	0.58
PR103	35,575	33,911	27,390	37,454	37,590	42,788	33,928	31,303	31,130	34,966	-0.20	0.00
PR104	21,364	24,376	23,075	24,703	23,855	24,469	25,815	24,670	26,257	27,494	1.99	0.74
PR105	10,056	9,823	11,618	12,446	11,134	12,205	12,757	11,339	12,690	13,996	2.92	0.65

District : SEBERANG PERAI TENGAH

PR106	8,142	11,382	12,981	13,369	11,998	10,757	12,293	13,530	13,716	9,564	1.58	0.08
PR107	10,878	9,165	8,256	8,260	8,666	10,353	10,553	9,921	12,143	13,952	3.66	0.42
PR108	40,018	28,012	30,425	22,605	31,712	30,706	46,409	45,483	43,724	49,981	5.61	0.42
PR109	39,072	29,975	41,880	34,363	37,012	24,609	45,895	45,001	52,655	52,986	4.55	0.32
PR110	49,809	44,871	48,913	50,214	48,730	52,129	49,765	41,678	44,632	43,738	-1.20	0.24
PR111	3,027	6,557	4,430	4,560	5,829	4,943	3,455	4,345	4,003	4,517	-0.60	0.01
PR112	39,748	28,969	36,748	37,081	29,947	23,488	36,876	33,210	39,050	39,358	0.75	0.02
PR116	34,076	50,151	47,787	53,451	56,601	56,349	60,230	56,932	64,993	48,588	3.78	0.41
PR117	84,633	76,756	89,591	78,171	89,263	95,869	102,391	117,380	132,813	161,699	7.21	0.82

District : SEBERANG PERAI SELATAN

PR113	12,961	13,019	15,724	15,302	20,160	19,887	21,811	24,090	28,563	27,542	9.37	0.96
PR114	13,724	17,107	15,978	11,713	11,523	14,544	13,017	9,923	9,898	10,279	-5.00	0.59
PR115	34,144	35,689	34,400	35,236	35,062	37,548	39,617	43,137	44,684	44,249	3.31	0.86

District : PULAU PINANG TIMUR LAUT

PR201	20,242	22,884	23,061	24,392	24,799	27,334	26,085	28,442	27,106	28,419	3.39	0.87
PR202	66,098	79,922	77,112	73,316	75,234	81,717	82,488	91,517	81,583	72,034	1.34	0.20
PR207	24,429	25,549	25,067	24,982	15,175	27,213	29,440	32,807	31,036	27,676	2.97	0.18
PR208	98,459	99,248	96,142	161,094	106,482	99,652	107,749	100,205	100,571	92,251	-0.90	0.03

District : PULAU PINANG BARAT DAYA

PR203	36,412	41,843	40,757	43,232	47,285	50,776	50,950	59,900	6.19	0.9638	6.19	0.96
PR204	6,859	7,543	7,426	7,191	8,155	8,281	8,693	10,637	7.00	0.8649	7.00	0.86
PR205	9,058	9,070	9,391	9,714	12,042	12,283	9,725	9,846	1.34	0.1258	1.34	0.13
PR206	13,325	11,668	12,642	12,751	13,326	16,634	12,835	9,229	-0.80	0.0249	-0.80	0.02
PR209	56,236	53,614	52,437	62,145	57,620	60,108	62,253	60,415	1.58	0.5346	1.58	0.53

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

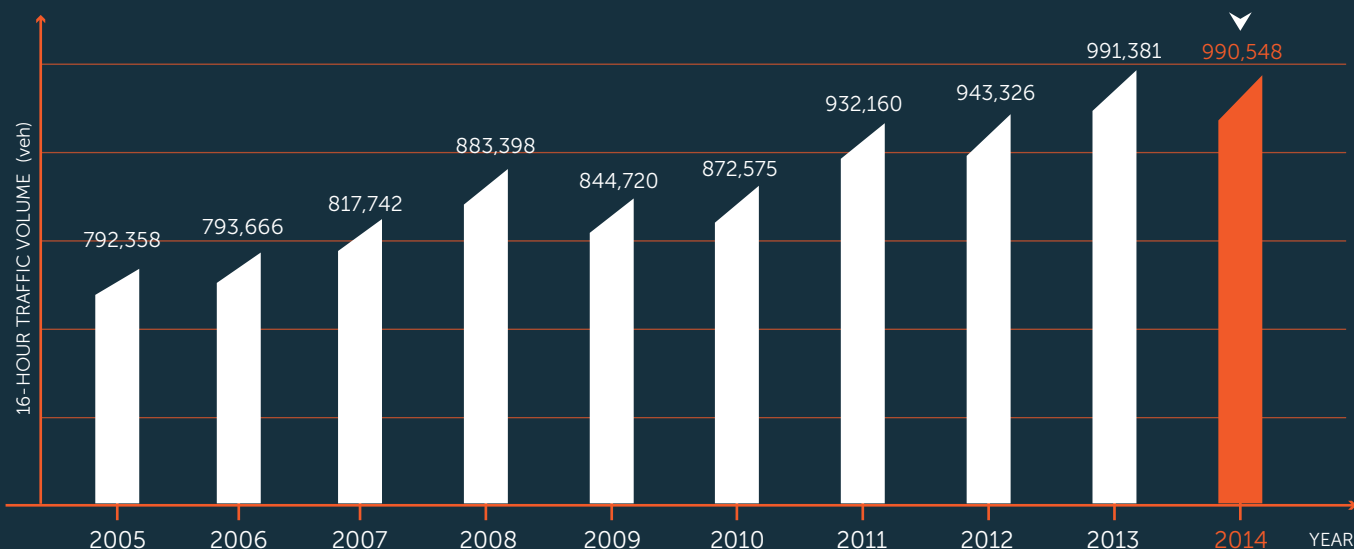


Figure 3.3-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Pulau Pinang



There are 26 census stations in Pulau Pinang. The 16-hour traffic volume documented for year 2014 has seen a slight decrease of 833 vehicles in Pulau Pinang. Overall, pattern shows a gradual and steady growth throughout, increasing significantly in 2008 but dropping 4.38% the following year. Growth became steady again from 2010 until 2013 before a slight decrease of 0.08% in 2014.

**-0.08%
DECREASE
FROM 2013**

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

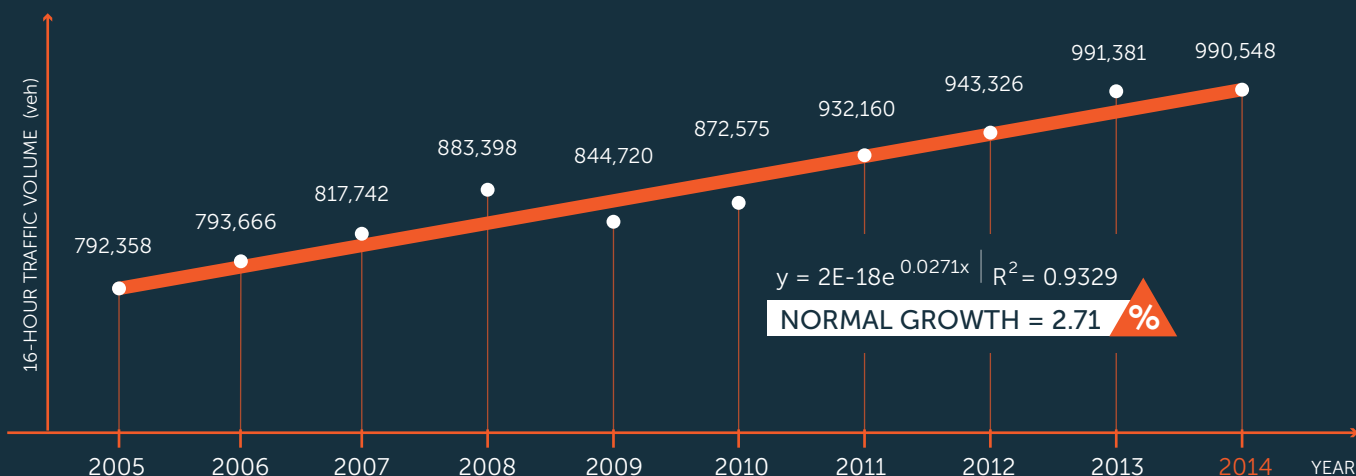
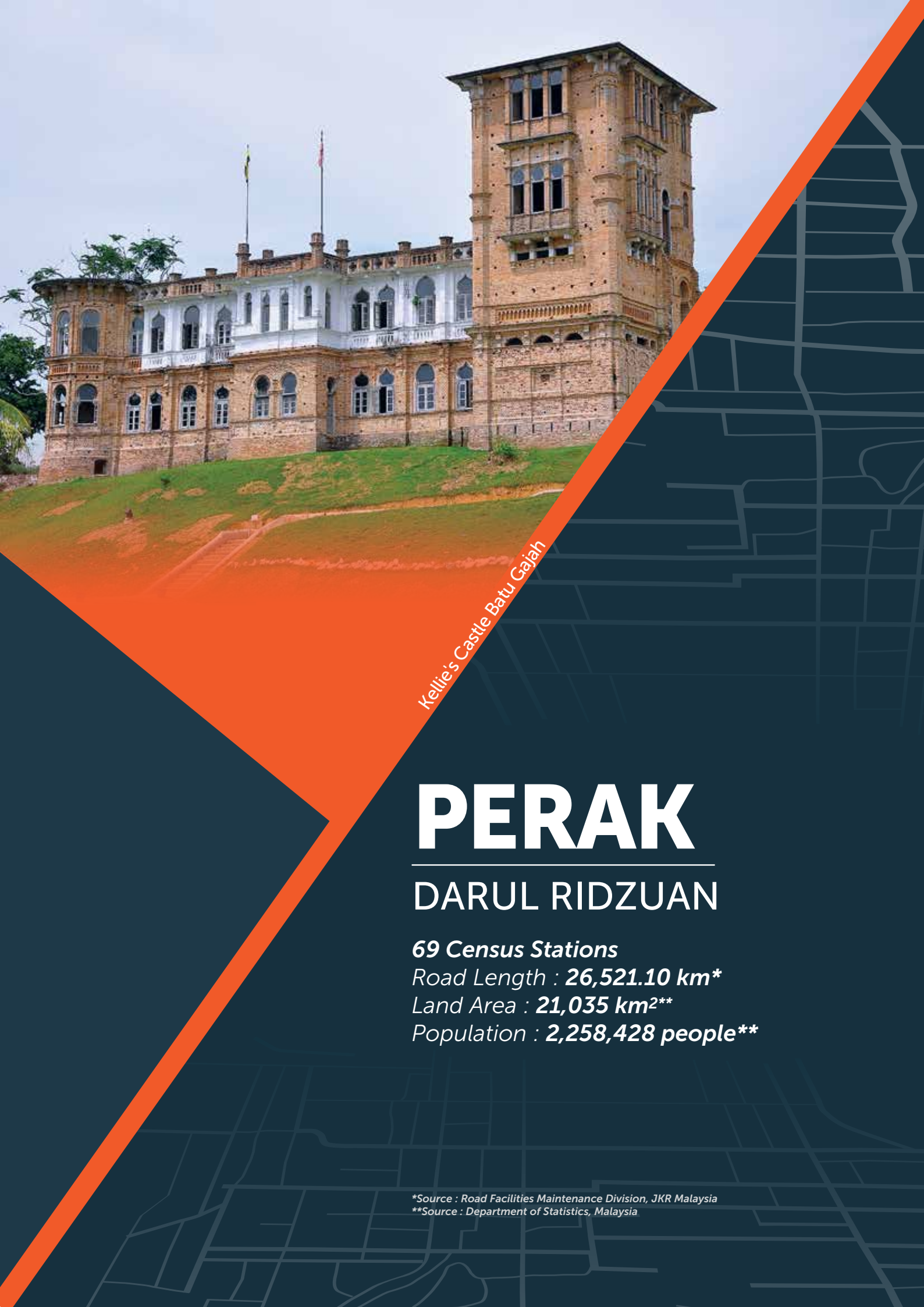


Figure 3.3-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Pulau Pinang

Traffic growth rate recorded for the state of Pulau Pinang is 2.71% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Pulau Pinang.



Kellie's Castle Batu Gajah

PERAK

DARUL RIDZUAN

69 Census Stations

Road Length : 26,521.10 km*

Land Area : 21,035 km²**

Population : 2,258,428 people**

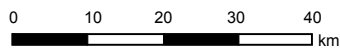
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **PERAK**

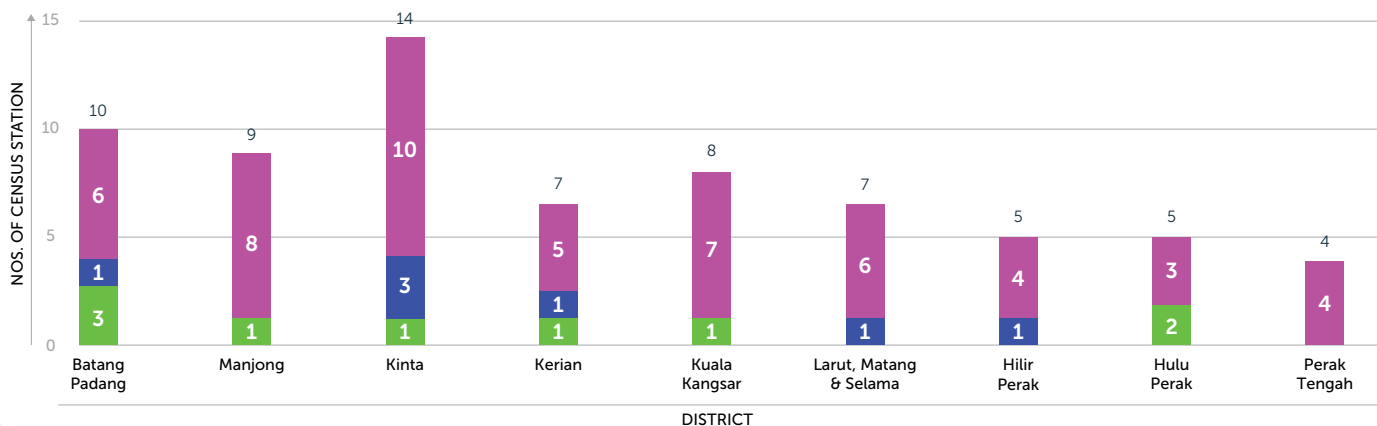
LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PERAK**

District : BATANG PADANG

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
AR101	0	1	106.6	Ipoh - Tanjong Malim (Slim River toll house)	N : 3° 49' 15.4" E : 101° 24' 51.8"	Dual	4
AR102	0	1	70.8	Ipoh - Tanjong Malim (south of Bidor)	N : 4° 5' 34.0" E : 101° 17' 01.4"	Single	4
AR103	3	1	62.8	Ipoh - Tapah-Bidor		Dual	4
AR104	1	1	54.7	Ipoh - Tapah	N : 4° 12' 46.4" E : 101° 15' 16.0"	Single	2
AR105	0	58	68.4	Ipoh - Bidor - Telok Anson		Single	2
AR106	3	70	56.4	Ipoh - Kampar - Changkat Jering	N : 4° 08' 32.9" E : 101° 08' 43.6"	Single	2
AR107	3	59	4.8	Tapah - Cameron Highlands	N : 4° 13' 12.2" E : 101° 16' 55.5"	Single	2
AR108	3	A119	3.2	Tapah - Chendering	N : 4° 12' 20.9" E : 101° 15' 34.0"	Single	2
AR109	3	A10	1.6	Tapah - Kampong Changkat Pantai	N : 4° 11' 55.1" E : 101° 15' 11.0"	Single	2
AR110	3	A121	122.4	Ipoh - Selim-Behrang Ulu (Old road)		Single	2

District : MANJONG

AR201	3	5	103.0	Ipoh - Koh - Kampong Kayan	N : 4° 08' 09.8" E : 100° 43' 40.7"	Single	2
AR202	3	18	95.8	Ipoh - Simpang Ampat - Lumut	N : 4° 12' 38.7" E : 100° 40' 47.1"	Dual	4
AR203	3	60	86.9	Ipoh - Batu Hampar - Damar Laut	N : 4° 23' 39.9" E : 100° 37' 50.1"	Single	2
AR204	0	5	78.9	Ipoh - Lumut	N : 4° 19' 29.8" E : 100° 46' 34.2"	Dual	4
AR205	3	71	72.5	Ipoh - Bruas - Lumut	N : 4° 22' 18.6" E : 100° 47' 38.7"	Single	2
AR206	3	73	55.5	Ipoh - Tanjong Belanja - Bruas	N : 4° 29' 33.1" E : 100° 47' 33.0"	Single	2
AR207	3	100	5.0	Ipoh - Simpang Kg. Aceh - Lumut	N : 4° 13' 38.2" E : 100° 40' 36.0"	Single	2
AR208	3	60	29.0	Ipoh - Pantai Remis - Seri Manjung	N : 4° 16' 25.0" E : 100° 40' 23.7"	Single	2
AR209	3	A12	3.0	Ipoh - Air Tawar - Pantai Remis	N : 4° 20' 17.2" E : 100° 45' 02.3"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PERAK**

District : KINTA

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
AR301	3	1	35.9	Ipoh - Kampar (near S.M. Kampar)	N : 4° 19' 40.2" E : 101° 09' 17.1"	Dual	4
AR302	1	1	22.5	Ipoh - Kampar (100m south of Kota Bharu junction)	N : 4° 26' 58.4" E : 101° 09' 58.8"	Dual	4
AR303	1	1	5.6	Ipoh - Gopeng	N : 4° 33' 43.4" E : 101° 06' 46.0"	Dual	4
AR304	0	1	8.1	Ipoh - Chemor	N : 4° 39' 23.2" E : 101° 06' 30.5"	Dual	4
AR305	3	1	18.7	Ipoh - Chemor - Kuala Kangsar	N : 4° 44' 46.7" E : 101° 07' 03.7"	Dual	4
AR306	3	A1	9.7	Ipoh - Tanjong Rambutan	N : 4° 37' 18.8" E : 101° 08' 55.5"	Dual	6
AR307	3	A3	3.4	Ipoh - Jelapang - Chemor	N : 4° 36' 56.2" E : 101° 03' 27.8"	Dual	6
AR308	1	5	9.7	Ipoh - Lahat	N : 4° 29' 57.3" E : 101° 00' 43.0"	Single	2
AR309	3	73	22.5	Ipoh - Siputeh - Parit	N : 4° 27' 26.8" E : 100° 58' 07.5"	Single	2
AR310	3	5	22.5	Ipoh - Siputeh - Kampong Bota Kanan	N : 4° 26' 10.6" E : 100° 59' 56.3"	Dual	4
AR311	3	A8	15.3	Batu Gajah Route I (100m from Route 1 junction)	N : 4° 30' 07.6" E : 101° 08' 45.0"	Dual	6
AR312	3	A15	14.0	Ipoh - Batu Gajah - Tanjong Tualang	N : 4° 27' 00.3" E : 101° 02' 29.7"	Single	2
AR313	3	A114	30.5	Kuala Dipang - Tanjong Tualang	N : 4° 22' 38.8" E : 101° 09' 18.8"	Single	2
AR314	3	A119	0.3	Ipoh - Kuala Dipang - Kampong Sahum	N : 4° 22' 26.1" E : 101° 09' 55.8"	Dual	4

District : KERIAN

AR401	0	1	98.2	Ipoh - Bagan Serai	N : 4° 57' 5.7" E : 100° 37' 39.6"	Single	2
AR402	1	1	111.1	Ipoh - Bagan Serai - Butterworth	N : 5° 01' 38.0" E : 100° 31' 36.4"	Single	2
AR403	3	75	11.0	Bagan Serai - Kuala Kurau	N : 5° 00' 58.2" E : 100° 31' 22.6"	Single	2
AR404	3	A6	31.0	Ipoh - Bagan Serai - Selama	N : 5° 01' 09.9" E : 100° 32' 48.7"	Single	2
AR405	3	A100	25.0	Simpang Empat Semanggol - Gula	N : 4° 57' 02.6" E : 100° 37' 44.5"	Single	2
AR406	3	A111	35.0	Ipoh - Jalan Gunong Semanggol - Bukit Merah	N : 4° 59' 39.5" E : 100° 39' 16.3"	Single	2
AR407	3	A4	21.0	Ipoh - Taiping - Simpang Empat Semanggol	N : 4° 57' 44.8" E : 100° 39' 54.7"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PERAK**

District : KUALA KANGSAR

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
AR501	3	1	30.4	Ipoh - Kuala Kangsar (Hospital Sg. Siput)	N : 4° 42' 50.2" E : 101° 08' 30.8"	Dual	4
AR502	0	1	56.0	Ipoh - Kuala Kangsar - Changkat Jering (Kg. Kuala Dal)	N : 5° 11' 19.0" E : 100° 13' 57.4"	Single	2
AR503	3	A76	56.4	Ipoh - Kuala Kangsar - Lenggong (Lunuk Merbau)	N : 4° 48' 28.9" E : 100° 53' 44.3"	Single	2
AR504	3	A76	68.1	Ipoh - Kuala Kangsar - Grik (Kg. Chuar Hulu)	N : 4° 53' 49.9" E : 100° 54' 10.1"	Single	2
AR505	3	A11	46.7	Ipoh - Kampong Tamuan - Kati (Kg. Lubuk Chapin)	N : 4° 51' 09.5" E : 100° 56' 52.7"	Single	2
AR506	3	A3	53.9	Ipoh - Kuala Kangsar - Kenas RPA 4, Jerlun)	N : 4° 44' 46.3" E : 100° 55' 13.0"	Single	2
AR507	3	A164	5.0	Simpang Sayong - Jambatan Sultan Abdul Jalil	N : 4° 46' 48.1" E : 100° 57' 08.9"	Dual	4
AR508	3	A164	6.0	Simpang Sayong - Tg. Belanja	N : 4° 46' 44.4" E : 100° 57' 09.3"	Dual	4

District : LARUT, MATANG DAN SELAMA

AR601	3	1	82.1	Changkat Jering - Semanggol	N : 4° 50' 52.5" E : 100° 41' 38.9"	Single	2
AR602	3	60	79.7	Ipoh - Batu Hampar - Changkat Jering	N : 4° 45' 12.8" E : 100° 43' 12.9"	Single	2
AR603	3	60	96.6	Ipoh - Batu Hampar - Changkat Jering	N : 4° 36' 58.9" E : 100° 42' 55.7"	Single	2
AR604	1	74	83.7	Taiping - Ipoh	N : 4° 49' 25.4" E : 100° 42' 49.3"	Dual	4
AR605	3	A7	101.4	Ipoh - Taiping - Pondok Tanjong	N : 4° 57' 56.2" E : 100° 43' 48.7"	Single	2
AR606	3	A5	101.4	Ipoh - Taiping - Batu Kurau	N : 4° 57' 54.9" E : 100° 43' 54.2"	Single	2
AR607	3	74	8.1	Taiping - Port Weld	N : 4° 48' 48.8" E : 100° 41' 41.5"	Single	2

District : HILIR PERAK

AR701	3	5	112.7	Ipoh - Telok Intan - Sabak	N : 3° 51' 19.7" E : 100° 57' 54.7"	Dual	4
AR702	3	69	117.5	Ipoh - Simpang Empat - Bagan Datoh	N : 3° 53' 23.3" E : 100° 52' 00.9"	Single	2
AR703	1	5	106.3	Ipoh - Telok Intan - Simpang Empat	N : 3° 54' 45.7" E : 100° 56' 45.4"	Single	2
AR704	3	58	78.9	Ipoh - Changkat Jong - Telok Intan	N : 3° 58' 28.1" E : 101° 06' 04.1"	Single	2
AR705	3	109	-	100m north of Sg. Manik / Kg.Gajah Road junction	N : 4° 00' 30.7" E : 101° 02' 17.5"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PERAK**

District : HULU PERAK

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
AR801	0	76	40.0	Kuala Kangsar - Baling	N : 5° 04' 26.8" E : 100° 57' 22.2"	Single	2
AR802	3	76	133.6	Ipoh - Lenggong - Grik	N : 5° 17' 42.4" E : 101° 03' 30.4"	Single	2
AR803	0	4	2.4	Lebuhraya Timur - Barat	N : 5° 27' 18.4" E : 101° 12' 14.4"	Single	2
AR804	3	76	164.2	Ipoh - Grik - Kroh	N : 5° 30' 22.0" E : 101° 07' 54.3"	Single	2
AR805	3	77	2.0	Pengkalan Hulu - Bentong	N : 5° 43' 01.3" E : 101° 00' 19.2"	Single	2

District : PERAK TENGAH

AR901	3	5	49.1	Ipoh - Pusing - Bota Kiri - Sitiawan	N : 4° 21' 45.6" E : 100° 49' 59.4"	Dual	4
AR902	3	72	19.6	Tanjong Belanja - Kampong Bota Kiri	N : 4° 21' 45.5" E : 100° 52' 30.2"	Single	2
AR903	3	109	26.6	Parit - Kg. Gajah	N : 4° 16' 45.3" E : 100° 54' 05.9"	Single	2
AR904	3	A3	82.9	Ipoh - Kuala Kangsar - Kampong Buloh Akar	N : 4° 31' 44.7" E : 100° 51' 59.1"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERAK**

MARCH 2014

District : **BATANG PADANG**

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
AR101	17,515	15,144	1,287	1800-1900	59.1	9.3	6.9	8.1	0.8	15.7	100.0
AR102	14,675	13,147	1,160	1700-1800	54.8	8.9	9.7	6.3	0.7	19.6	100.0
AR103	-	14,991	1,266	1700-1800	58.6	6.6	10.1	4.8	0.8	19.1	100.0
AR104	-	15,428	1,278	1700-1800	60.5	6.1	7.8	5.0	1.1	19.5	100.0
AR105	7,467	6,768	534	1200-1300	51.1	9.6	6.6	2.4	1.0	29.3	100.0
AR106	-	6,401	516	1700-1800	57.0	5.4	15.5	11.0	2.5	8.6	100.0
AR107	-	6,721	681	0700-0800	59.2	8.6	3.7	5.1	1.9	21.5	100.0
AR108	-	2,628	313	0700-0800	35.0	5.8	3.9	0.4	0.1	54.8	100.0
AR109	-	7,871	897	0700-0800	68.0	7.9	6.6	1.2	1.0	15.4	100.0
AR110	-	1,554	152	1700-1800	34.7	12.2	7.3	2.6	2.4	40.8	100.0

District : **MANJONG**

AR201	-	15,894	1,710	0700-0800	54.9	12.2	6.9	4.6	0.9	20.4	100.0
AR202	-	45,656	3,999	1700-1800	62.8	12.2	2.7	0.2	0.4	21.7	100.0
AR203	-	11,109	940	0700-0800	49.9	13.3	11.3	8.0	0.7	16.9	100.0
AR204	26,212	24,075	2,192	1800-1900	57.2	12.2	8.0	4.0	0.9	17.7	100.0
AR205	-	5,507	502	0700-0800	44.0	8.3	9.4	5.6	1.0	31.8	100.0
AR206	-	7,009	654	0700-0800	36.5	7.0	6.6	3.4	0.9	45.7	100.0
AR207	-	17,318	1,757	0700-0800	61.8	11.8	4.7	1.4	0.7	19.7	100.0
AR208	-	12,479	1,254	0700-0800	51.2	12.5	8.9	6.9	0.5	19.9	100.0
AR209	-	6,013	585	0700-0800	48.6	15.5	13.5	3.6	1.5	17.1	100.0

District : **KINTA**

AR301	-	28,908	2,697	1700-1800	60.7	6.5	7.2	4.6	2.0	18.9	100.0
AR302	-	24,553	2,155	1700-1800	67.0	4.9	8.3	4.7	1.0	14.0	100.0
AR303	-	78,167	5,977	0700-0800	70.5	8.8	3.5	0.8	0.5	15.8	100.0
AR304	78,586	70,596	5,868	1800-1900	66.4	4.2	2.8	2.0	0.6	24.0	100.0
AR305	-	25,503	3,138	0700-0800	48.7	10.5	10.2	4.6	1.2	24.9	100.0
AR306	-	40,352	3,767	1700-1800	68.8	3.5	4.2	0.1	0.3	23.2	100.0
AR307	-	59,083	5,638	1800-1900	51.1	9.4	6.9	0.9	0.6	31.2	100.0
AR308	-	24,768	2,354	0700-0800	64.8	12.2	7.0	2.2	0.6	13.3	100.0
AR309	-	5,337	475	0700-0800	42.2	12.2	9.9	3.2	0.9	31.6	100.0
AR310	-	17,674	1,759	1300-1400	57.1	8.6	8.5	6.5	1.9	17.4	100.0
AR311	-	7,876	1,035	1800-1900	53.2	11.0	8.4	6.6	1.5	19.2	100.0
AR312	-	12,984	1,400	0700-0800	59.1	4.5	8.9	1.7	0.6	25.2	100.0
AR313	-	7,849	574	0700-0800	50.9	5.6	9.0	3.1	1.0	30.3	100.0
AR314	-	4,872	719	0700-0800	33.1	12.5	11.0	8.4	0.7	34.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERAK**

MARCH 2014

District : KERIAN

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
AR401	17,779	15,875	1,346	1700-1800	58.6	6.5	7.6	4.2	0.9	22.2	100.0
AR402	-	16,870	1,261	1700-1800	49.6	10.8	8.9	7.0	1.0	22.7	100.0
AR403	-	12,819	1,230	1700-1800	46.9	4.8	3.8	0.4	0.6	43.5	100.0
AR404	-	6,916	582	0700-0800	47.0	8.5	8.2	1.3	0.1	34.9	100.0
AR405	-	6,471	734	0700-0800	40.9	4.8	4.8	1.0	0.6	47.9	100.0
AR406	-	4,379	476	0700-0800	45.3	7.0	7.7	1.5	0.5	38.0	100.0
AR407	-	5,807	595	0700-0800	46.6	6.1	6.4	0.9	1.1	39.0	100.0

District : KUALA KANGSAR

AR501	-	19,117	1,884	0700-0800	50.4	8.8	6.2	4.9	1.1	28.6	100.0
AR502	13,904	12,159	1,074	1800-1900	54.1	7.4	6.7	9.6	0.6	21.6	100.0
AR503	-	8,979	1,067	1900-2000	74.7	5.6	2.3	0.9	0.8	15.7	100.0
AR504	-	6,524	532	0700-0800	67.5	7.9	6.7	4.5	0.8	12.7	100.0
AR505	-	4,351	469	0700-0800	48.5	6.3	6.1	4.5	0.3	34.3	100.0
AR506	-	10,564	1,082	1700-1800	51.3	4.7	3.7	2.5	0.7	37.0	100.0
AR507	-	5,869	718	0700-0800	48.3	4.3	4.3	2.4	0.3	40.4	100.0
AR508	-	7,829	863	0700-0800	48.1	4.6	3.2	1.7	0.2	42.2	100.0

District : LARUT, MATANG DAN SELAMA

AR601	-	20,322	1,874	0700-0800	44.8	9.5	13.6	6.2	1.0	25.0	100.0
AR602	-	3,414	339	0700-0800	31.1	8.7	18.4	8.7	1.1	32.0	100.0
AR603	-	12,000	996	1700-1800	44.9	11.9	13.9	8.3	0.8	20.3	100.0
AR604	-	33,108	2,788	1800-1900	70.1	4.5	1.8	0.3	0.7	22.5	100.0
AR605	-	3,496	343	0800-0900	44.2	13.2	7.4	2.1	0.5	32.6	100.0
AR606	-	10,500	1,131	0700-0800	47.0	8.0	6.6	0.6	0.4	37.3	100.0
AR607	-	13,779	1,390	1700-1800	48.8	11.3	6.3	0.9	0.8	31.8	100.0

District : HILIR PERAK

AR701	-	10,063	893	1700-1800	47.6	13.9	14.0	13.6	0.7	10.1	100.0
AR702	-	10,572	1,170	0700-0800	50.7	8.0	7.9	1.8	0.7	30.9	100.0
AR703	-	25,404	1,928	1700-1800	63.5	4.7	6.3	4.9	0.9	19.8	100.0
AR704	-	8,955	789	1800-1900	54.4	13.5	7.2	6.3	2.5	16.2	100.0
AR705	-	6,059	726	1700-1800	61.4	10.7	7.1	3.1	0.4	17.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERAK**

MARCH 2014

District : HULU PERAK

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
AR801	6,303	5,652	524	1800-1900	65.7	12.6	9.6	4.1	1.0	7.0	100.0
AR802	-	7,198	643	1700-1800	49.3	12.4	6.1	4.2	0.8	27.2	100.0
AR803	4,010	3,316	300	1700-1800	52.4	18.5	7.3	9.6	1.3	10.9	100.0
AR804	-	7,255	736	1400-1500	42.8	9.5	6.5	1.3	1.2	38.8	100.0
AR805	-	6,816	555	0700-0800	41.0	10.5	2.7	0.9	0.0	44.9	100.0

District : PERAK TENGAH

AR901	-	21,276	1,976	0700-0800	62.8	8.1	8.9	6.1	0.7	13.4	100.0
AR902	-	4,338	533	0800-0900	47.7	8.5	10.7	1.9	0.5	30.8	100.0
AR903	-	5,620	551	1800-1900	56.4	7.9	5.2	1.9	0.4	28.1	100.0
AR904	-	1,426	136	1400-1500	39.8	8.4	8.0	8.4	1.6	33.8	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERAK**

SEPTEMBER 2014

District : **BATANG PADANG**

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
AR101	19,507	17,857	1,502	1300-1400	60.1	7.4	6.2	9.0	0.6	16.6	100.0
AR102	10,901	9,147	687	1800-1900	58.1	8.7	9.2	8.4	1.0	14.7	100.0
AR103	-	14,673	1,354	1200-1300	57.4	7.4	10.3	5.7	0.9	18.3	100.0
AR104	-	15,211	1,275	0700-0800	58.3	7.1	7.7	6.4	0.7	19.9	100.0
AR105	6,430	5,696	444	1800-1900	50.4	9.8	8.0	3.0	1.2	27.6	100.0
AR106	-	8,078	676	1800-1900	54.4	9.4	16.4	5.6	0.8	13.3	100.0
AR107	-	7,327	785	1700-1800	54.2	7.3	5.8	1.2	0.9	30.6	100.0
AR108	-	2,358	255	0700-0800	38.1	5.7	3.6	0.1	0.1	52.3	100.0
AR109	-	10,428	1,050	0700-0800	61.6	7.0	5.4	1.9	0.9	23.3	100.0
AR110	-	1,532	194	0700-0800	39.0	11.4	6.3	2.0	1.1	40.2	100.0

District : **MANJONG**

AR201	-	14,614	1,345	0700-0800	54.5	11.0	7.7	6.6	1.0	19.1	100.0
AR202	-	47,842	3,671	1700-1800	59.0	18.1	2.9	0.2	0.4	19.4	100.0
AR203	-	10,466	882	0700-0800	51.8	14.3	10.1	7.0	0.6	16.2	100.0
AR204	25,965	23,592	1,981	1700-1800	56.4	12.7	8.9	4.4	0.8	16.7	100.0
AR205	-	5,094	404	1200-1300	42.3	8.6	9.2	4.8	1.4	33.8	100.0
AR206	-	6,637	784	0700-0800	36.1	7.6	6.6	3.3	1.0	45.4	100.0
AR207	-	16,736	1,722	0700-0800	65.6	10.3	4.5	1.0	0.6	18.0	100.0
AR208	-	13,362	1,182	1700-1800	52.5	13.9	7.6	6.0	0.6	19.4	100.0
AR209	-	6,389	624	0700-0800	52.5	14.4	12.0	3.8	1.3	16.0	100.0

District : **KINTA**

AR301	-	25,343	2,265	0700-0800	53.5	11.3	10.3	7.0	1.8	16.0	100.0
AR302	-	23,974	2,032	1700-1800	68.2	5.9	8.3	4.8	1.0	11.8	100.0
AR303	-	78,253	6,474	0700-0800	69.9	10.1	4.1	0.8	0.5	14.5	100.0
AR304	64,386	58,904	11,684	1300-1400	72.2	6.6	1.4	0.8	0.7	18.3	100.0
AR305	-	24,728	2,548	1700-1800	52.2	8.3	6.9	3.2	0.8	28.7	100.0
AR306	-	42,145	4,237	1800-1900	66.3	3.7	2.5	0.3	0.4	26.9	100.0
AR307	-	61,166	8,189	1700-1800	72.1	4.0	2.1	1.3	1.5	19.0	100.0
AR308	-	26,097	2,211	1700-1800	65.1	11.6	7.2	2.6	0.6	12.8	100.0
AR309	-	6,130	525	0700-0800	42.3	14.1	8.4	2.0	1.2	32.0	100.0
AR310	-	21,971	2,075	0900-1000	55.7	10.2	10.3	6.6	1.3	15.9	100.0
AR311	-	9,352	983	1700-1800	50.8	12.4	10.0	5.1	1.3	20.3	100.0
AR312	-	12,943	1,639	0700-0800	56.2	5.7	10.6	1.9	1.0	24.5	100.0
AR313	-	6,994	818	0700-0800	51.2	6.1	10.0	3.6	0.8	28.3	100.0
AR314	-	1,625	189	1200-1300	31.4	10.1	7.7	13.6	2.3	35.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERAK**

SEPTEMBER 2014

District : KERIAN

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
AR401	17,406	15,581	1,327	1700-1800	59.5	9.0	6.9	4.3	0.9	19.5	100.0
AR402	-	17,937	1,488	1700-1800	58.6	7.6	7.6	5.0	1.1	20.1	100.0
AR403	-	8,651	1,147	1700-1800	36.4	10.2	2.8	0.8	0.8	49.1	100.0
AR404	-	6,468	686	0700-0800	51.8	10.0	5.7	1.4	0.1	31.1	100.0
AR405	-	6,633	820	0700-0800	47.2	5.4	2.3	0.8	0.6	43.8	100.0
AR406	-	4,315	498	0700-0800	53.0	7.8	3.9	1.7	0.6	33.0	100.0
AR407	-	5,550	519	1200-1300	52.1	7.7	3.1	1.1	1.1	34.9	100.0

District : KUALA KANGSAR

AR501	-	18,038	1,655	0700-0800	54.4	8.7	5.5	4.9	1.0	25.4	100.0
AR502	13,025	11,300	1,196	0800-0900	60.5	9.7	8.9	8.0	0.7	12.2	100.0
AR503	-	9,143	876	0700-0800	61.9	8.9	5.5	3.0	1.0	19.7	100.0
AR504	-	6,416	565	1700-1800	64.4	9.1	8.7	5.0	0.6	12.3	100.0
AR505	-	4,402	465	0700-0800	50.1	8.0	6.7	4.1	0.6	30.6	100.0
AR506	-	9,540	827	1800-1900	53.8	6.3	4.1	2.3	0.7	32.8	100.0
AR507	-	7,454	735	0700-0800	45.8	4.7	4.2	5.4	0.2	39.7	100.0
AR508	-	7,097	529	1800-1900	50.1	5.4	3.5	0.9	0.5	39.7	100.0

District : LARUT, MATANG DAN SELAMA

AR601	-	19,439	1,681	1700-1800	47.5	9.3	13.8	6.3	0.9	22.2	100.0
AR602	-	3,315	315	1300-1400	31.0	7.8	20.1	9.4	0.7	31.0	100.0
AR603	-	13,062	1,167	1700-1800	49.8	9.6	13.0	9.7	0.8	17.1	100.0
AR604	-	39,829	3,067	1700-1800	62.0	4.6	4.1	0.8	0.8	27.7	100.0
AR605	-	3,531	303	0700-0800	44.0	10.3	9.0	2.1	0.7	34.0	100.0
AR606	-	9,787	1,213	0700-0800	53.6	8.9	5.8	0.4	0.6	30.6	100.0
AR607	-	15,227	1,408	0700-0800	53.7	7.6	6.5	1.8	0.6	29.8	100.0

District : HILIR PERAK

AR701	-	11,860	2,314	1100-1200	52.2	14.3	11.4	13.0	0.9	8.1	100.0
AR702	-	10,589	1,175	0700-0800	50.3	8.9	9.3	2.6	0.7	28.3	100.0
AR703	-	26,325	2,161	1700-1800	59.0	7.2	6.5	5.5	0.8	20.9	100.0
AR704	-	10,596	887	1700-1800	60.1	8.0	8.2	6.6	2.3	14.8	100.0
AR705	-	5,348	495	0700-0800	62.0	9.4	7.1	5.8	0.3	15.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PERAK**

SEPTEMBER 2014

District : HULU PERAK

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
AR801	5,570	5,017	469	1500-1600	60.8	16.6	9.2	5.7	0.8	6.8	100.0
AR802	-	6,752	592	1400-1500	46.5	10.6	5.9	3.7	1.9	31.5	100.0
AR803	4,807	3,955	435	1100-1200	59.1	16.8	6.4	5.9	1.6	10.2	100.0
AR804	-	6,972	645	1800-1900	44.8	11.2	7.0	4.7	2.2	30.1	100.0
AR805	-	5,690	720	1400-1500	39.8	10.4	3.5	1.2	0.2	44.9	100.0

District : PERAK TENGAH

AR901	-	20,851	1,810	0700-0800	56.8	11.6	10.6	5.4	0.8	14.8	100.0
AR902	-	4,222	527	1700-1800	46.6	8.3	10.9	2.6	0.2	31.3	100.0
AR903	-	5,661	698	0700-0800	48.9	11.1	8.5	3.5	0.5	27.5	100.0
AR904	-	1,786	205	0700-0800	38.5	10.1	8.1	5.5	1.2	36.6	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PERAK**

AVERAGE 2014

District : BATANG PADANG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
AR101	16,501	1,394	59.6	8.4	6.6	8.6	0.7	16.1	A
AR102	11,147	923	56.4	8.8	9.4	7.4	0.8	17.1	B
AR103	14,832	1,310	58.0	7.0	10.2	5.3	0.8	18.7	A
AR104	15,320	1,276	59.4	6.6	7.7	5.7	0.9	19.7	D
AR105	6,232	489	50.8	9.7	7.3	2.7	1.1	28.4	A
AR106	7,240	596	55.7	7.4	15.9	8.3	1.7	11.0	A
AR107	7,024	733	56.7	8.0	4.7	3.1	1.4	26.1	A
AR108	2,493	284	36.6	5.8	3.8	0.3	0.1	53.6	A
AR109	9,150	974	64.8	7.4	6.0	1.5	0.9	19.3	A
AR110	1,543	601	36.8	11.8	6.8	2.3	1.8	40.5	A

District : MANJONG

AR201	15,254	1,528	54.7	11.6	7.3	5.6	1.0	19.7	F
AR202	46,749	3,835	60.9	15.1	2.8	0.2	0.4	20.5	A
AR203	10,788	911	50.8	13.8	10.7	7.5	0.6	16.5	C
AR204	23,834	2,086	56.8	12.4	8.4	4.2	0.9	17.2	A
AR205	5,301	453	43.1	8.4	9.3	5.2	1.2	32.8	A
AR206	6,823	719	36.3	7.3	6.6	3.3	1.0	45.5	A
AR207	17,027	1,740	63.7	11.0	4.6	1.2	0.6	18.8	D
AR208	12,921	1,218	51.8	13.2	8.3	6.5	0.6	19.7	C
AR209	6,201	605	50.6	15.0	12.8	3.7	1.4	16.5	A

District : KINTA

AR301	27,126	2,481	57.1	8.9	8.8	5.8	1.9	17.5	B
AR302	24,263	2,094	67.6	5.4	8.3	4.7	1.0	12.9	A
AR303	78,210	6,226	70.2	9.5	3.8	0.8	0.5	15.1	F
AR304	64,750	8,776	69.3	5.4	2.1	1.4	0.6	21.2	F
AR305	25,116	2,843	50.4	9.4	8.5	3.9	1.0	26.8	B
AR306	41,249	4,002	67.5	3.6	3.3	0.2	0.3	25.1	A
AR307	60,125	6,914	61.6	6.7	4.5	1.1	1.0	25.1	D
AR308	25,433	2,283	64.9	11.9	7.1	2.4	0.6	13.1	F
AR309	5,734	500	42.2	13.2	9.1	2.6	1.1	31.8	A
AR310	19,823	1,917	56.4	9.4	9.4	6.5	1.6	16.7	A
AR311	8,614	1,009	52.0	11.7	9.2	5.9	1.4	19.8	A
AR312	12,964	1,520	57.7	5.1	9.8	1.8	0.8	24.8	E
AR313	7,422	696	51.1	5.9	9.5	3.3	0.9	29.3	A
AR314	3,249	454	32.2	11.3	9.3	11.0	1.5	34.7	A

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PERAK**

AVERAGE 2014

District : KERIAN

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
AR401	15,728	1,336	59.1	7.7	7.3	4.2	0.9	20.8	D
AR402	17,404	1,375	54.1	9.2	8.2	6.0	1.0	21.4	A
AR403	10,735	1,189	41.6	7.5	3.3	0.6	0.7	46.3	A
AR404	6,692	634	49.4	9.2	6.9	1.4	0.1	33.0	A
AR405	6,552	777	44.0	5.1	3.6	0.9	0.6	45.8	A
AR406	4,347	487	49.1	7.4	5.8	1.6	0.5	35.5	A
AR407	5,679	557	49.3	6.9	4.7	1.0	1.1	36.9	A

District : KUALA KANGSAR

AR501	18,578	1,770	52.4	8.7	5.9	4.9	1.1	27.0	A
AR502	11,729	1,135	57.3	8.6	7.8	8.8	0.6	16.9	D
AR503	9,061	972	68.3	7.2	3.9	1.9	0.9	17.7	A
AR504	6,470	549	65.9	8.5	7.7	4.7	0.7	12.5	A
AR505	4,377	467	49.3	7.2	6.4	4.3	0.4	32.4	A
AR506	10,052	955	52.6	5.5	3.9	2.4	0.7	34.9	A
AR507	6,662	727	47.0	4.5	4.2	3.9	0.3	40.1	A
AR508	7,463	696	49.1	5.0	3.3	1.3	0.4	40.9	A

District : LARUT, MATANG DAN SELAMA

AR601	19,881	1,778	46.1	9.4	13.7	6.3	1.0	23.6	F
AR602	3,365	327	31.1	8.2	19.3	9.0	0.9	31.5	A
AR603	12,531	1,082	47.3	10.8	13.4	9.0	0.8	18.7	E
AR604	36,469	2,928	66.0	4.6	3.0	0.6	0.7	25.1	A
AR605	3,514	323	44.1	11.7	8.2	2.1	0.6	33.3	A
AR606	10,144	1,172	50.3	8.5	6.2	0.5	0.5	34.0	B
AR607	14,503	1,399	51.3	9.5	6.4	1.4	0.7	30.8	D

District : HILIR PERAK

AR701	10,962	1,604	49.9	14.1	12.7	13.3	0.8	9.1	A
AR702	10,581	1,173	50.5	8.4	8.6	2.2	0.7	29.6	C
AR703	25,865	2,044	61.3	5.9	6.4	5.2	0.9	20.4	F
AR704	9,776	838	57.2	10.8	7.7	6.4	2.4	15.5	B
AR705	5,704	611	61.7	10.1	7.1	4.5	0.3	16.3	A

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PERAK**

AVERAGE 2014

District : HULU PERAK

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
AR801	2,826	497	63.3	14.6	9.4	4.9	0.9	6.9	A
AR802	6,975	618	47.9	11.5	6.0	4.0	1.3	29.3	A
AR803	3,636	368	55.7	17.6	6.9	7.8	1.5	10.5	A
AR804	7,114	691	43.8	10.4	6.8	3.0	1.7	34.4	A
AR805	6,253	638	40.4	10.5	3.1	1.0	0.1	44.9	A

District : PERAK TENGAH

AR901	21,064	1,893	59.8	9.8	9.7	5.8	0.8	14.1	A
AR902	4,280	530	47.2	8.4	10.8	2.3	0.3	31.0	A
AR903	5,641	625	52.7	9.5	6.9	2.7	0.5	27.8	A
AR904	1,606	171	39.1	9.3	8.0	7.0	1.4	35.2	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PERAK**

District : **BATANG PADANG**

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
AR101	11,892	13,555	15,028	13,854	15,038	15,323	14,039	14,431	15,328	16,501	2.22	0.56
AR102	11,621	11,503	12,244	12,041	11,503	14,454	13,191	14,225	13,812	11,147	1.31	0.17
AR103	13,971	14,585	14,265	15,054	14,632	14,966	15,057	14,994	15,341	14,832	0.71	0.58
AR104	12,672	14,860	14,745	14,984	15,618	14,944	15,991	15,253	15,199	15,320	1.32	0.41
AR105	9,673	9,123	9,391	8,970	8,057	8,923	7,368	7,099	6,687	6,232	-4.90	0.89
AR106	6,135	6,483	6,659	7,084	7,852	7,427	7,841	7,565	7,310	7,240	1.95	0.52
AR107	5,570	5,416	6,054	6,260	5,853	6,244	6,473	7,153	7,796	7,024	3.42	0.81
AR108	1,407	1,561	2,046	2,294	2,410	2,168	2,080	2,343	2,302	2,493	4.94	0.62
AR109	5,487	6,710	7,054	7,071	7,582	7,297	7,644	8,292	7,978	9,150	4.13	0.83
AR110	1,160	1,305	1,298	1,060	957	1,203	1,054	1,131	1,278	1,543	1.18	0.07

District : **MANJONG**

AR201	11,014	11,832	12,509	13,375	13,935	14,342	14,331	14,975	15,077	15,254	3.49	0.91
AR202	37,311	39,890	42,117	44,049	46,594	43,896	47,749	48,757	46,346	46,749	2.42	0.74
AR203	9,674	9,331	9,717	10,162	10,693	10,767	11,160	10,273	11,052	10,788	1.66	0.67
AR204	19,764	20,907	20,778	21,138	23,920	22,389	23,758	25,283	25,942	23,834	2.70	0.80
AR205	4,427	4,418	4,535	4,730	4,890	5,171	5,412	5,678	5,812	5,301	3.11	0.86
AR206	3,487	3,459	3,837	6,161	6,656	6,552	6,915	6,967	6,786	6,823	8.53	0.72
AR207	11,332	10,530	11,918	12,776	13,958	14,620	15,866	15,647	17,179	17,027	5.54	0.94
AR208	-	9,570	7,659	10,549	11,400	11,780	11,663	12,445	13,049	12,921	5.25	0.72
AR209	-	5,323	5,478	5,193	6,373	6,254	6,227	6,214	6,765	6,201	2.63	0.62

District : **KINTA**

AR301	22,677	24,314	23,262	23,050	23,659	31,022	30,311	27,497	28,520	27,126	2.82	0.52
AR302	20,544	21,741	23,244	23,180	23,341	23,518	19,485	25,951	25,176	24,263	1.55	0.28
AR303	58,955	62,597	64,866	71,205	79,513	84,135	73,487	85,819	77,195	78,210	3.37	0.64
AR304	49,873	54,778	41,708	60,968	71,845	80,595	70,470	82,923	73,024	64,750	5.06	0.49
AR305	24,510	30,029	25,811	25,699	25,075	26,251	29,168	39,267	29,117	25,116	1.53	0.11
AR306	31,466	30,935	36,416	42,284	38,475	41,786	38,155	38,194	48,879	41,249	3.43	0.57
AR307	26,006	30,794	25,367	29,434	23,614	34,204	46,163	51,996	49,227	60,125	9.78	0.77
AR308	20,354	27,880	24,007	20,742	23,084	24,336	22,253	27,970	28,020	25,433	1.86	0.22
AR309	6,981	7,214	6,801	7,109	5,804	6,207	7,280	6,303	6,209	5,734	-1.90	0.39
AR310	23,367	24,503	17,680	17,239	18,561	15,378	19,306	15,522	14,681	19,823	-3.40	0.35
AR311	6,261	6,537	6,299	7,208	6,643	8,087	8,286	8,638	10,312	8,614	5.00	0.82
AR312	11,277	12,208	9,174	11,683	11,899	11,750	11,956	13,356	13,361	12,964	2.32	0.42
AR313	6,254	7,088	7,801	8,670	9,230	8,350	9,994	12,777	14,818	7,422	5.76	0.43
AR314	1,996	1,931	2,100	1,748	2,266	1,951	2,124	2,260	1,956	3,249	3.20	0.33

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PERAK**

District : KERIAN

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
AR401	13,713	13,461	13,830	14,112	14,743	14,777	15,143	16,130	16,268	15,728	2.15	0.90
AR402	17,378	17,767	17,675	18,207	17,491	17,972	16,679	17,406	16,495	17,404	-0.50	0.24
AR403	10,911	11,386	12,818	12,325	12,685	12,287	11,724	11,629	11,235	10,735	-0.60	0.07
AR404	5,920	5,361	6,986	6,488	6,414	7,315	6,760	6,583	7,028	6,692	1.79	0.36
AR405	4,429	4,784	4,785	5,353	5,520	5,932	5,746	5,550	6,522	6,552	4.07	0.89
AR406	3,241	3,537	3,735	3,843	4,166	4,698	4,433	4,246	4,084	4,347	2.93	0.62
AR407	4,481	4,713	5,355	5,447	5,852	5,670	5,660	6,312	5,501	5,679	2.50	0.56

District : KUALA KANGSAR

AR501	15,079	15,399	17,142	18,036	19,085	19,426	22,500	19,251	20,478	18,578	3.11	0.59
AR502	11,658	11,816	12,048	11,687	14,348	13,309	12,599	12,008	11,485	11,729	-0.01	0.00
AR503	7,075	7,245	9,789	8,135	10,312	8,739	8,966	8,847	8,352	9,061	1.72	0.19
AR504	6,048	6,875	6,045	5,886	7,103	6,891	6,420	6,625	7,927	6,470	1.39	0.22
AR505	4,033	3,610	3,814	3,588	3,357	4,335	4,132	4,121	4,202	4,377	1.74	0.34
AR506	7,530	7,440	7,335	7,824	8,463	8,406	8,536	8,647	10,216	10,052	3.57	0.87
AR507	-	4,522	4,671	5,135	6,791	5,809	6,537	6,376	6,670	6,662	5.02	0.72
AR508	-	5,759	5,746	7,164	7,512	6,741	7,044	8,183	7,595	7,463	3.46	0.60

District : LARUT, MATANG DAN SELAMA

AR601	9,527	10,208	11,989	16,091	16,752	14,128	3,379	19,410	20,588	19,881	5.51	0.09
AR602	9,417	2,667	2,887	2,705	7,163	11,385	11,831	3,181	3,412	3,365	-1.30	0.00
AR603	8,817	15,758	15,574	10,034	7,076	10,270	18,646	12,586	12,938	12,531	1.79	0.03
AR604	33,700	39,968	46,533	44,168	45,713	36,198	37,714	39,945	30,367	36,469	-1.60	0.13
AR605	2,374	2,488	3,068	3,431	3,293	3,947	3,594	3,299	3,778	3,514	4.32	0.61
AR606	8,021	7,876	8,110	8,071	8,832	8,784	9,351	9,627	10,209	10,144	3.17	0.93
AR607	11,066	10,992	10,554	10,931	11,066	13,415	12,599	13,254	13,071	14,503	3.28	0.78

District : HILIR PERAK

AR701	9,777	10,255	11,291	10,206	9,643	10,286	10,192	10,047	10,554	10,962	0.43	0.07
AR702	8,400	8,321	9,502	8,612	9,482	9,629	10,132	10,241	10,872	10,581	2.93	0.86
AR703	21,284	23,258	14,351	24,244	25,159	25,365	25,004	28,465	25,489	25,865	3.59	0.33
AR704	8,619	8,453	8,793	8,806	9,504	9,758	10,135	11,064	9,249	9,776	2.04	0.54
AR705	4,316	4,936	5,613	5,033	5,588	5,668	5,655	6,216	5,516	5,704	2.52	0.56

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PERAK**

District : HULU PERAK

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
AR801	6,931	4,169	5,319	2,509	2,715	1,724	3,110	3,562	3,487	2,826	-6.80	0.27
AR802	6,218	6,726	9,260	7,498	8,006	10,831	6,760	6,930	7,627	6,975	0.28	0.00
AR803	2,609	2,906	2,846	2,946	3,078	3,337	3,148	3,944	3,796	3,636	4.10	0.84
AR804	6,516	6,945	6,982	5,953	5,638	8,234	5,586	5,869	6,306	7,114	-0.30	0.01
AR805	4,926	5,566	6,192	6,555	7,812	5,477	6,167	6,552	6,862	6,253	2.03	0.23

District : PERAK TENGAH

AR901	16,496	13,550	14,182	15,405	13,191	14,543	16,257	21,547	21,573	21,064	4.73	0.55
AR902	3,497	3,317	1,991	3,110	3,129	3,426	3,648	4,300	4,599	4,280	5.17	0.44
AR903	4,974	3,941	3,176	4,249	4,189	4,575	4,813	5,831	4,891	5,641	3.72	0.40
AR904	1,471	1,176	1,238	1,454	1,321	1,363	1,567	1,637	1,918	1,606	3.56	0.55

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

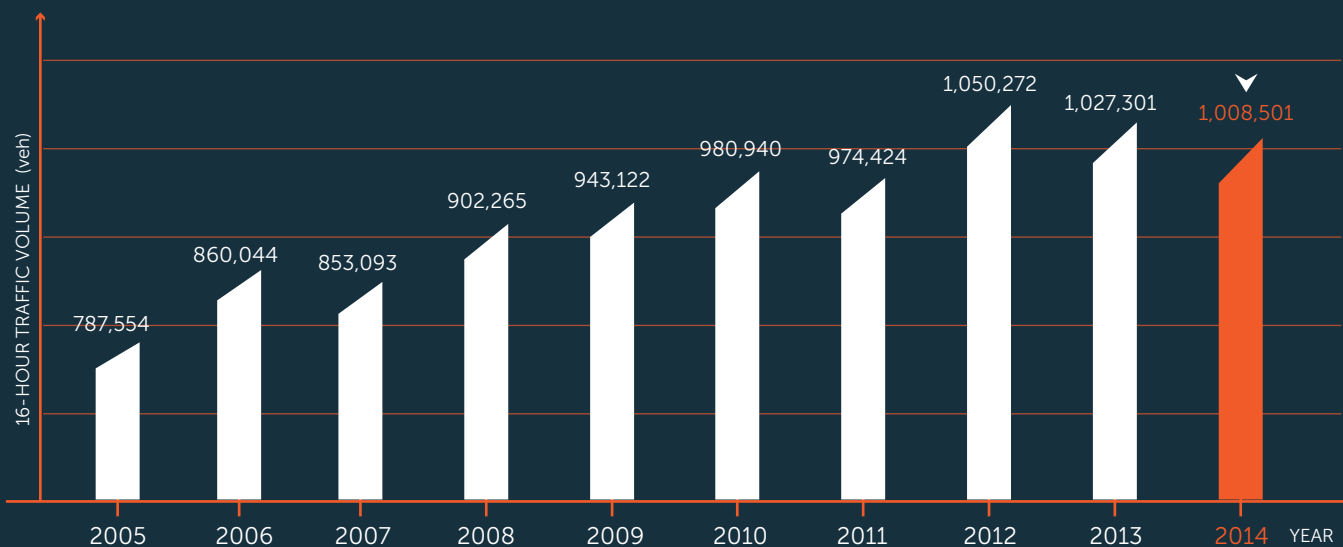


Figure 3.4-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Perak



There are 69 census stations in Perak. Figure 3.4-1 shows a gradual increase pattern in 16-hour traffic volume documented since year 2005. But there's slight decreases in 2007, 2011, 2013 and 2014. In 2014, there's 1.83% decrease which is equivalent to 18,800 vehicles. Overall, traffic growth rate has been positive within the 10 years span.

-1.83%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

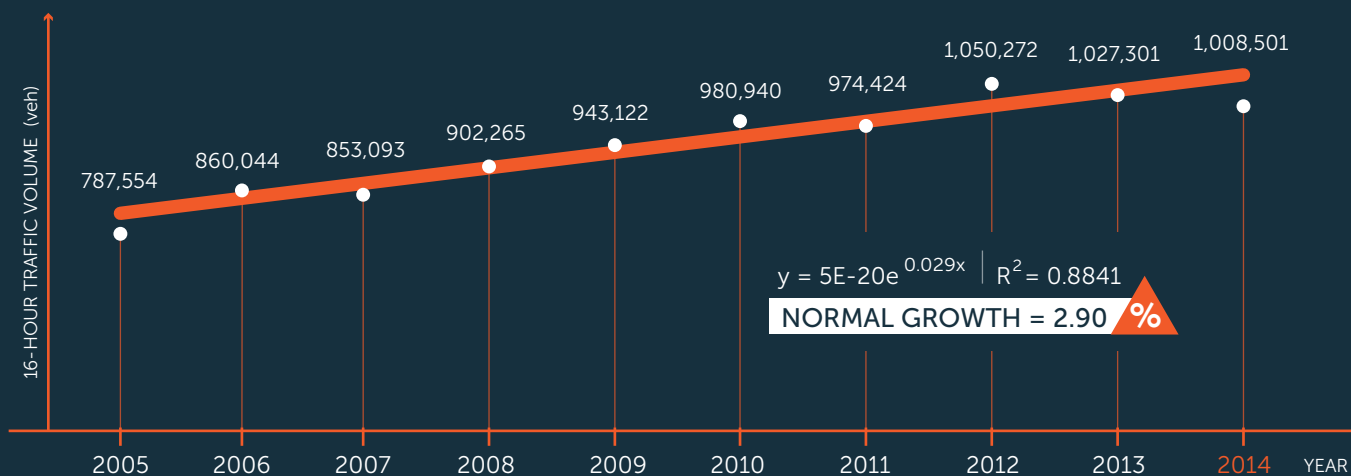


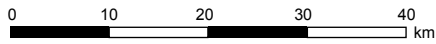
Figure 3.4-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Perak

Traffic growth rate recorded for the state of Perak is 2.90% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Perak.

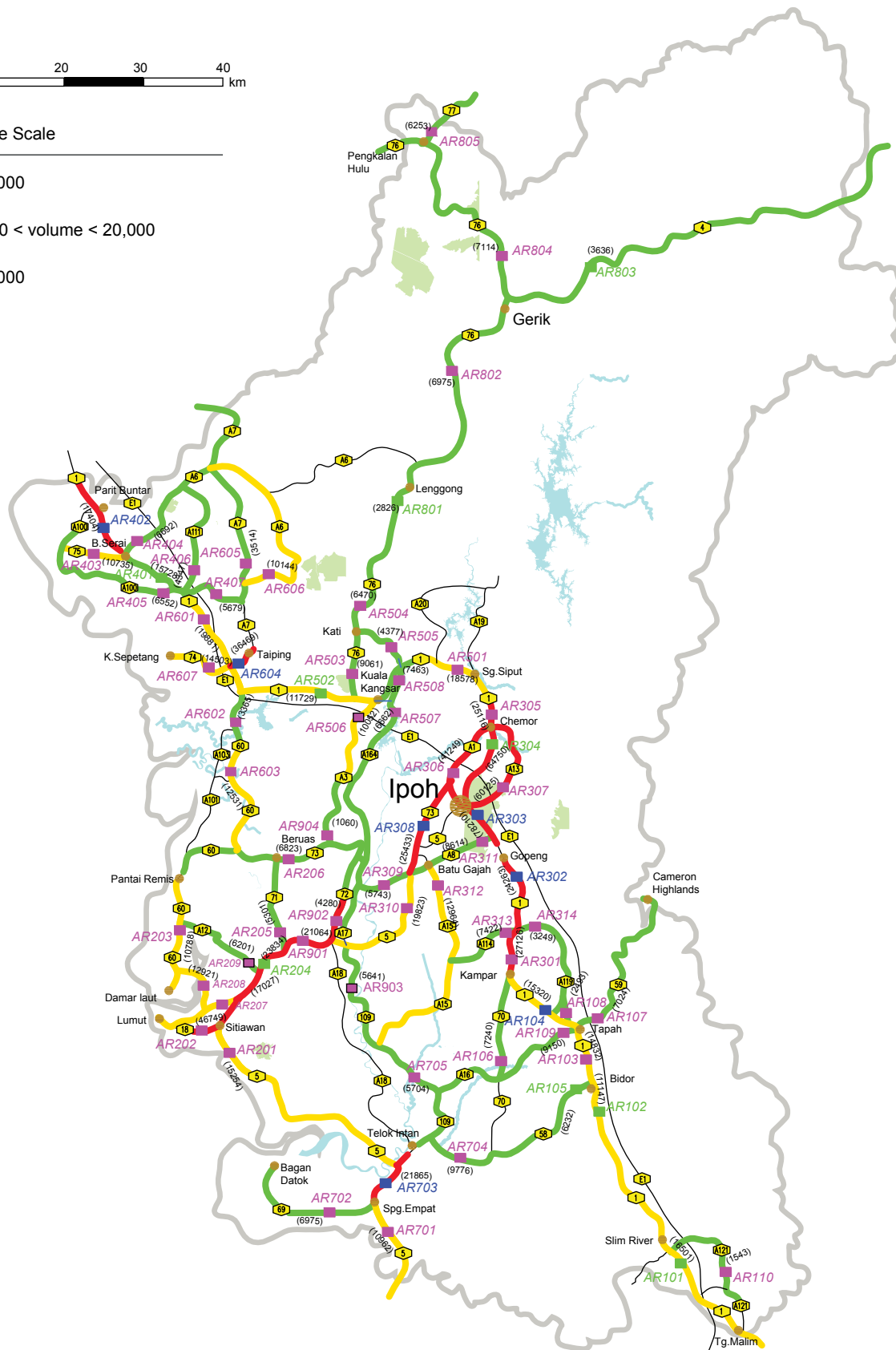
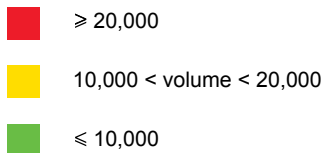
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **PERAK**

LEGEND



Traffic Volume Scale





State Mosque: Sultan Salahuddin Abdul Aziz Shah Mosque, Shah Alam

SELANGOR

DARUL EHSAN

66 Census Stations

Road Length : **16,154.28 km***

Land Area : **8,104 km²****

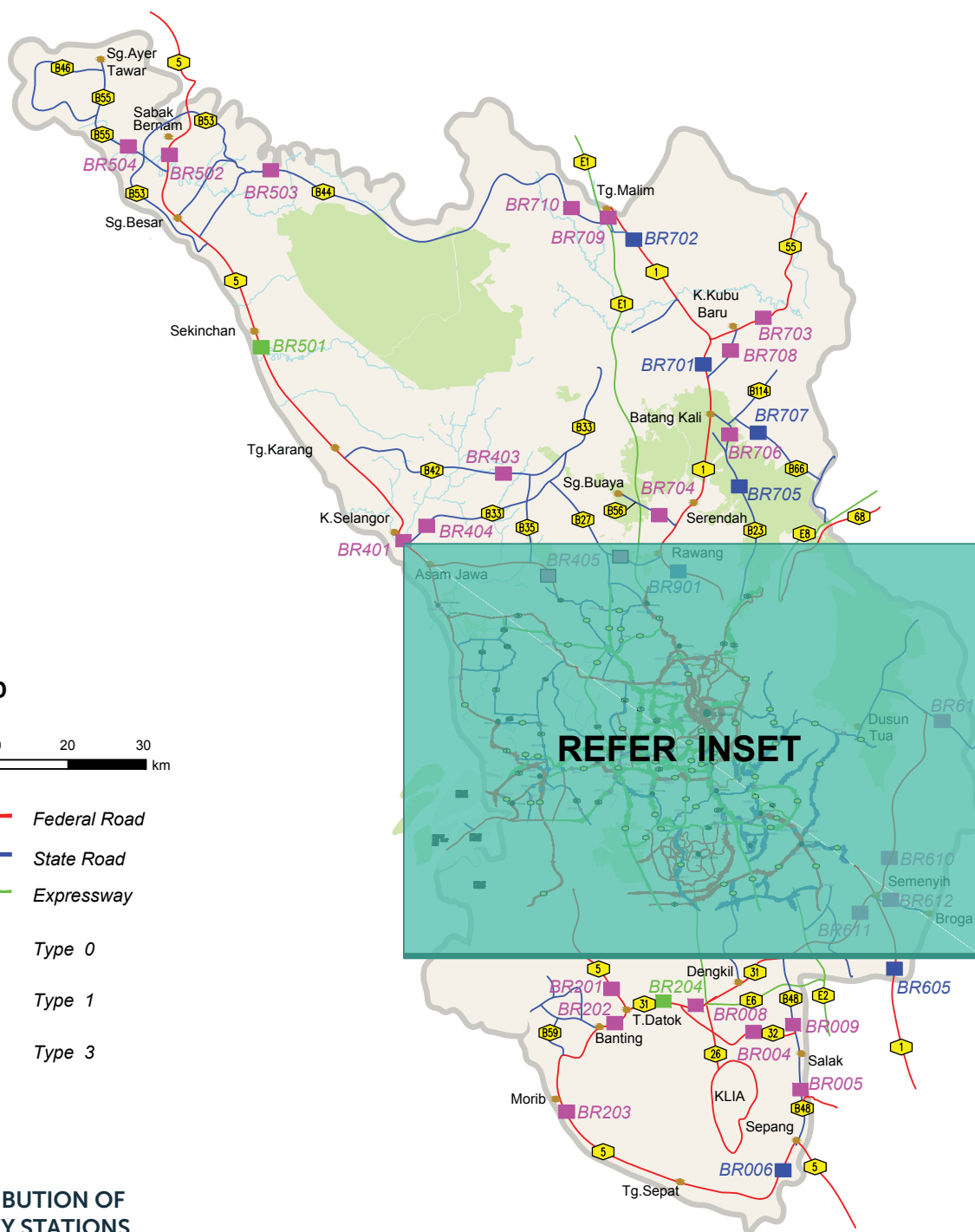
Population : **5,411,324 people****

*Source : Road Facilities Maintenance Division, JKR Malaysia

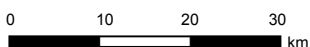
**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **SELANGOR**

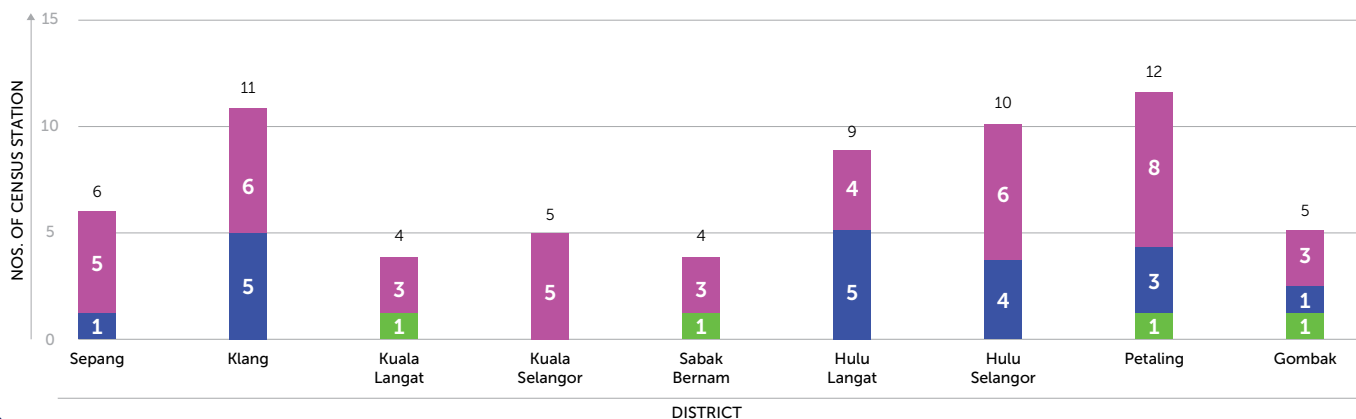


LEGEND



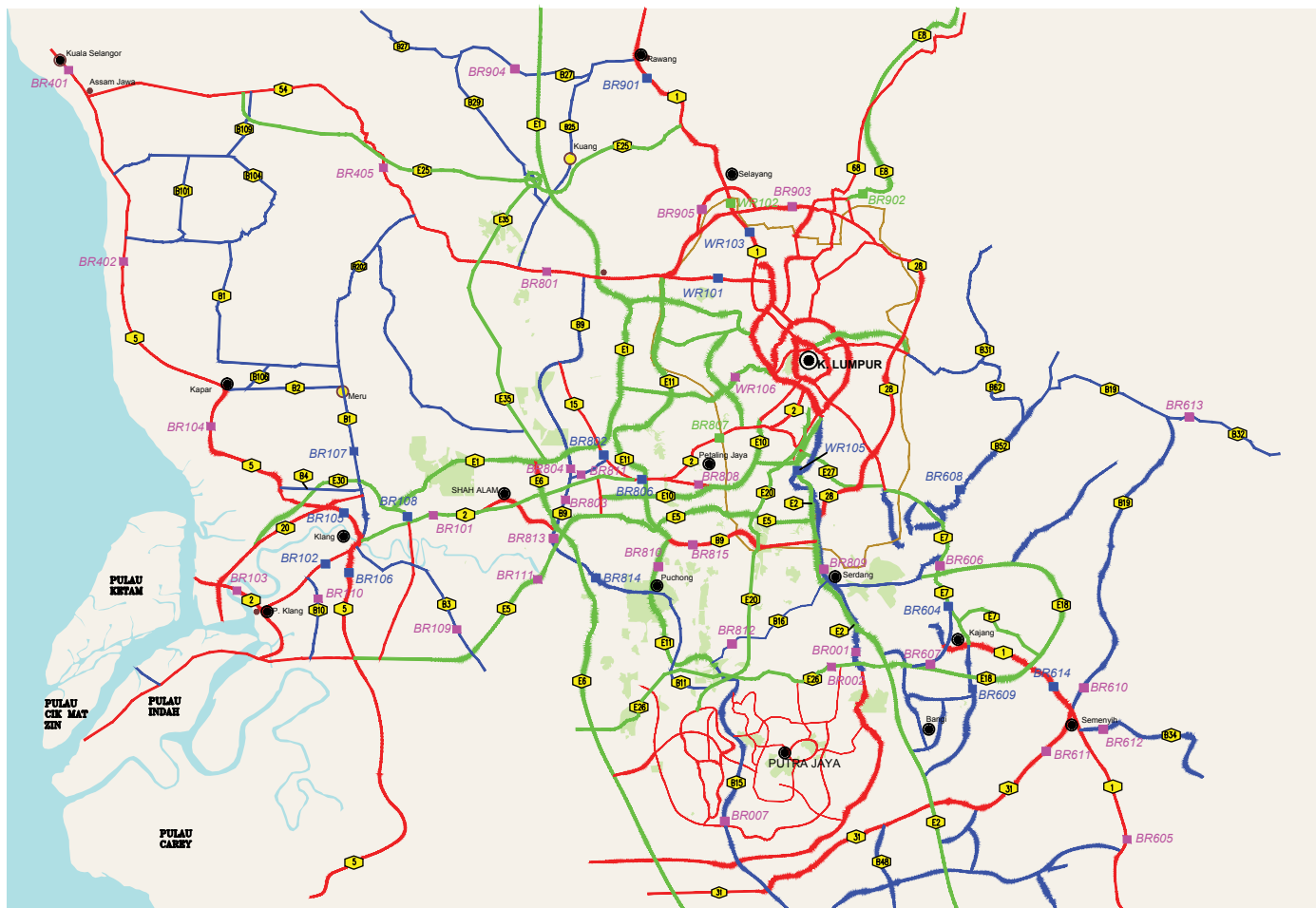
- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

DISTRIBUTION OF SURVEY STATIONS

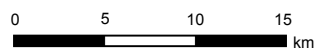


TRAFFIC CENSUS STATION MAP

STATE : **SELANGOR (INSET)**



LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SELANGOR**

District : SEPANG

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
BR004	3	32	4.0	Salak Tinggi - Bukit Changgang - Banting (IKTBN Sepang)	N : 2° 48' 21.2" E : 101° 43' 06.6"	Dual	4
BR005	3	B48	5.0	Kuala Lumpur - Salak - Sepang (Labu Johnson)	N : 2° 44' 16.8" E : 101° 45' 19.5"	Single	2
BR006	1	5	348.0	Klang - Sepang (Batu Dua)	N : 2° 39' 51.4" E : 101° 43' 53.0"	Single	2
BR007	3	29	42.0	KLIA - Putrajaya (PICC)	N : 2° 53' 40.7" E : 101° 39' 28.8"	Dual	6
BR008	3	31	16.0	Jln Dengkil - Banting (Plantation)	N : 2° 51' 02.7" E : 101° 39' 01.3"	Single	2
BR009	3	B48	14.0	Jalan Sepang - Kajang (Taman Rekreasi Pejabat Daerah Sepang)	N : 2° 48' 34.4" E : 101° 44' 46.8"	Single	2

District : KLANG

BR101	3	2	29.8	Kuala Lumpur - Klang	N : 3° 03' 25.8" E : 101° 28' 15.6"	Dual	4
BR102	1	2	3.5	Klang - Port Klang (Persiaran Raja Muda Musa)	N : 3° 01' 32.8" E : 101° 25' 23.9"	Dual	6
BR103	3	2	2.4	Jalan Pelabuhan (near Northport)	N : 3° 00' 25.6" E : 101° 23' 38.3"	Dual	4
BR104	3	5	12.9	Klang - Kuala Selangor	N : 3° 05' 12.0" E : 101° 23' 52.9"	Dual	6
BR105	1	5	3.2	Klang - Kuala Selangor	N : 3° 03' 40.3" E : 101° 28' 23.6"	Dual	4
BR106	1	5	6.4	Klang - Banting	N : 3° 00' 16.3" E : 101° 26' 31.0"	Dual	4
BR107	1	3217	4.8	Klang - Meru	N : 3° 04' 59.6" E : 101° 26' 47.0"	Dual	4
BR108	1	20	6.0	North Klang Straits Bypass (300m fr junction Federal Highway)	N : 3° 03' 41.4" E : 101° 28' 24.4"	Dual	6
BR109	3	190	37.0	Kuala Lumpur - Kg. Batu Enam - Klang Jalan Kebun	N : 3° 01' 22.3" E : 101° 28' 54.1"	Single	2
BR110	3	3218	2.4	Langat Road - Pandamaran (Pandamaran Road)	N : 3° 00' 20.5" E : 101° 24' 35.7"	Single	2
BR111	3	190	29.0	K. Lumpur - Puchong (Jln. Bukit Kemuning)	N : 3° 01' 27.8" E : 101° 28' 50.7"	Single	2

District : KUALA LANGAT

BR201	3	5	28.7	Klang - Telok Datok	N : 2° 50' 15.9" E : 101° 31' 35.4"	Dual	4
BR202	3	5	32.2	Klang - Telok Datok - Banting	N : 2° 49' 07.9" E : 101° 31' 16.9"	Dual	4
BR203	3	5	48.3	Klang - Morib - Batu Laut	N : 2° 43' 46.5" E : 101° 27' 19.3"	Single	2
BR204	0	31	61.2	Klang - Telok Datok - Morib - Sepang	N : 2° 50' 07.3" E : 101° 35' 52.1"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SELANGOR**

District : KUALA SELANGOR

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
BR401	3	5	45.4	Klang - Kuala Selangor	N : 3° 20' 10.3" E : 101° 15' 05.4"	Dual	4
BR402	3	5	29.0	Klang - Kuala Selangor	N : 3° 12' 19.3" E : 101° 18' 54.3"	Dual	4
BR403	3	B42	16.1	Pasir Penambang - Batang Berjuntai (Jalan Raja Musa)	N : 3° 24' 18.3" E : 101° 21' 29.6"	Single	2
BR404	3	B33	75.7	Kuala Lumpur - Rawang-Kuala Selangor	N : 3° 19' 40.7" E : 101° 15' 42.1"	Single	2
BR405	3	54	45.1	Kuala Lumpur - Kepong - Kuala Selangor	N : 3° 18' 46.0" E : 101° 25' 05.7"	Dual	4

District : SABAK BERNAM

BR501	0	5	72.1	Klang - Sabak Bernam	N : 3° 29' 34.8" E : 101° 06' 42.6"	Dual	4
BR502	3	5	106.3	Kuala Lumpur - Kuala Selangor - Sabak	N : 3° 44' 46.2" E : 100° 58' 33.5"	Dual	4
BR503	3	B44	16.1	Jalan Sg. Panjang - Ulu Bernam - Tg. Malim	N : 3° 43' 51.3" E : 101° 06' 13.2"	Single	2
BR504	3	B55	9.7	Sabak Bernam - Sungai Ayer Tawar (Sungai Ayer Tawar Road)	N : 3° 45' 32.3" E : 100° 54' 14.3"	Single	2

District : HULU LANGAT

BR604	1	1	21.7	Kuala Lumpur - Kajang - Telok Datok (Bt 14 Jln Cheras)	N : 2° 59' 57.1" E : 101° 47' 06.3"	Single	2
BR605	1	1	41.9	Kuala Lumpur - Seremban	N : 2° 52' 06.7" E : 101° 52' 11.6"	Single	2
BR608	1	B52	16.1	Kuala Lumpur - Cheras-Kampung Ulu Lui (Sg.Serai)	N : 3° 05' 19.5" E : 101° 47' 32.3"	Single	2
BR609	1	B17	27.4	Kuala Lumpur - Kajang - Telok Datok (Jln. Reko)	N : 2° 58' 05.9" E : 101° 47' 23.1"	Single	2
BR610	3	B19	35.4	Kuala Lumpur - Ulu Semenyih	N : 2° 57' 12.3" E : 101° 50' 45.8"	Single	2
BR611	3	31	33.8	Kuala Lumpur - Semenyih - Bangi (1km from Semenyih)	N : 2° 56' 14.9" E : 101° 50' 09.1"	Single	2
BR612	3	B34	35.4	Kuala Lumpur - Semenyih - Broga	N : 2° 56' 44.1" E : 101° 51' 07.5"	Dual	4
BR613	3	B32	33.5	Kajang - Genting Peras - Jelebu	N : 3° 08' 02.3" E : 101° 54' 58.1"	Single	2
BR614	1	1	28.5	Kajang - Mantin	N : 2° 57' 29.8" E : 101° 50' 27.7"	Dual	4

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SELANGOR**

District : HULU SELANGOR

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
BR701	1	1	58.6	Kuala Lumpur - Kuala Kubu Bahru Junction (south of junction)	N : 3° 33' 23.7" E : 101° 38' 33.6"	Dual	4
BR702	1	1	76.3	Kuala Lumpur - Tanjong Malim	N : 3° 39' 33.2" E : 101° 32' 26.3"	Dual	4
BR703	3	55	61.0	Kuala Lumpur - Kuala Kubu Baru - Gap	N : 3° 33' 44.2" E : 101° 40' 03.5"	Single	2
BR704	3	B56	1.0	Simpang Sg. Choh - Sg. Buaya	N : 3° 21' 23.5" E : 101° 34' 35.0"	Single	2
BR705	1	B23	5.5	Hulu Gombak - Hulu Yam Baru	N : 3° 24' 33.1" E : 101° 39' 47.8"	Single	2
BR706	3	B113	2.5	Batang Kali - Hulu Yam	N : 3° 27' 44.1" E : 101° 39' 22.9"	Dual	4
BR707	1	B66	6.4	Jalan Hulu Kali - Genting Highland	N : 3° 25' 42.9" E : 101° 43' 46.1"	Single	2
BR708	3	1	28.5	Jalan Ampang Pechah - Kg. Bukit Raja	N : 3° 32' 35.3" E : 101° 39' 39.6"	Single	2
BR709	3	B44	76.8	Jalan Hulu Bernam - Tanjong Malim	N : 3° 39' 54.7" E : 101° 32' 00.5"	Single	2
BR710	3	B44	5.9	Jalan Hulu Bernam - Sungai Besar	N : 3° 40' 17.2" E : 101° 31' 01.8"	Single	2

District : PETALING

BR801	3	54	22.5	Kuala Lumpur - Kuala Selangor	N : 3° 12' 21.6" E : 101° 33' 43.3"	Dual	4
BR802	1	15	17.7	Kuala Lumpur - Subang Airport	N : 3° 06' 01.4" E : 101° 35' 19.5"	Single	2
BR803	3	3214	33.0	Kuala Lumpur - Batu Tiga - Puchong	N : 3° 04' 07.3" E : 101° 33' 21.3"	Dual	4
BR804	3	B9	1.6	Batu Tiga - Damansara Road	N : 3° 05' 01.4" E : 101° 33' 18.2"	Dual	6
BR806	1	2	12.1	Kuala Lumpur - Klang	N : 3° 04' 59.6" E : 101° 36' 25.2"	Dual	6
BR807	0	2	8.1	Kuala Lumpur - Petaling Jaya (Fed. H'way-180m east of EPF blg)	N : 3° 06' 44.7" E : 101° 39' 23.7"	Dual	6
BR809	3	B13	16.1	Kuala Lumpur - Sungai Besi (Sungai Besi Road)	N : 3° 02' 50.6" E : 101° 42' 25.5"	Dual	6
BR811	3	3213	0.8	Jalan Bt. 3 (Opposite Balai Polis Bt. 3)	N : 3° 04' 38.7" E : 101° 33' 40.1"	Single	2
BR812	3	B16	22.5	KL - Puchong (km 12 to Sri Kembangan/km 4 to Puchong)	N : 2° 59' 22.2" E : 101° 37' 18.3"	Dual	6
BR813	3	B7	9.5	Kuala Lumpur - Puchong-Shah Alam	N : 3° 01' 48.0" E : 101° 37' 18.3"	Dual	6
BR814	1	B7	11.0	Kuala Lumpur - Puchong-Shah Alam	N : 3° 01' 55.7" E : 101° 34' 08.8"	Dual	4
BR815	3	207	10.0	Kuala Lumpur - Bukit Jalil - Puchong	N : 3° 04' 59.6" E : 101° 36' 25.5"	Dual	4

District : GOMBAK

BR901	1	1	415.5	Kuala Lumpur - Ipoh	N : 3° 18' 15.0" E : 101° 35' 43.0"	Single	2
BR902	0	28	14.1	Jalan Lingkar Tengah 2 (MRR2)	N : 3° 14' 26.5" E : 101° 43' 04.1"	Dual	6
BR903	3	28	9.9	Jalan Lingkar Tengah 2 (MRR2)	N : 3° 14' 07.0" E : 101° 41' 06.0"	Dual	4
BR904	3	B27	39.1	Rawang - Kuala Selangor	N : 3° 19' 09.0" E : 101° 30' 58.0"	Single	2
BR905	3	B22	0.6	Selayang - Kepong	N : 3° 13' 38.0" E : 101° 38' 16.0"	Dual	6

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SELANGOR**

MARCH 2014

District : SEPANG

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
BR004	-	61,716	5,969	0700-0800	63.4	11.0	5.0	5.5	0.5	14.6	100.0
BR005	-	35,646	2,924	0700-0800	67.0	9.0	6.2	4.6	1.2	12.1	100.0
BR006	-	22,930	2,178	1600-1700	71.8	12.1	2.9	0.5	0.7	12.0	100.0
BR007	-	83,211	7,100	0800-0900	84.6	5.2	2.5	1.8	1.0	5.0	100.0
BR008	-	15,032	2,159	0700-0800	58.2	8.2	7.2	5.6	0.6	20.3	100.0
BR009	-	14,089	1,803	0700-0800	66.9	11.2	3.7	0.9	0.2	17.0	100.0

District : KLANG

BR101	-	123,074	11,053	1700-1800	80.0	4.5	3.7	0.9	0.7	10.3	100.0
BR102	-	52,796	4,157	0800-0900	72.6	4.1	4.1	1.6	1.4	16.2	100.0
BR103	-	55,881	5,628	1800-1900	43.3	3.6	7.6	17.9	0.6	26.9	100.0
BR104	-	45,269	3,734	1800-1900	61.7	4.7	9.4	5.4	0.5	18.3	100.0
BR105	-	39,902	3,710	1800-1900	67.6	7.4	6.0	1.6	2.1	15.3	100.0
BR106	-	104,196	8,996	1800-1900	87.1	2.4	1.9	0.4	0.3	7.8	100.0
BR107	-	134,754	11,215	1700-1800	68.3	4.8	7.3	3.5	1.7	14.4	100.0
BR108	-	135,831	11,338	1700-1800	68.6	4.7	7.2	3.5	1.7	14.3	100.0
BR109	-	39,439	4,610	1800-1900	63.8	4.8	8.5	1.7	0.8	20.3	100.0
BR110	-	49,584	4,674	1800-1900	60.3	5.7	8.0	2.9	0.5	22.6	100.0
BR111	-	39,091	3,860	1800-1900	61.1	4.6	11.7	3.6	1.2	17.7	100.0

District : KUALA LANGAT

BR201	-	43,677	5,045	0700-0800	55.7	11.1	8.8	7.5	0.6	16.3	100.0
BR202	-	53,513	5,387	1700-1800	67.6	5.5	4.1	3.0	1.1	18.8	100.0
BR203	-	7,554	689	0700-0800	55.1	11.1	7.7	2.8	0.6	22.6	100.0
BR204	32,982	28,912	3,618	1800-1900	58.5	9.2	5.7	9.7	0.6	16.4	100.0

District : KUALA SELANGOR

BR401	-	45,773	3,994	1200-1300	52.6	12.0	9.4	8.7	0.9	16.3	100.0
BR402	-	27,595	4,066	1700-1800	56.6	9.7	6.8	7.7	0.6	18.5	100.0
BR403	-	3,647	367	0900-1000	40.6	11.5	17.0	8.3	0.3	22.3	100.0
BR404	-	19,984	1,869	1700-1800	66.0	8.8	3.9	0.7	0.4	20.3	100.0
BR405	-	23,109	2,316	0700-0800	50.5	11.3	11.4	8.6	0.8	17.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SELANGOR**

MARCH 2014

District : SABAK BERNAM

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
BR501	27,260	22,928	2,122	1800-1900	68.8	6.5	8.2	5.2	0.3	10.9	100.0
BR502	-	16,978	1,504	0700-0800	50.7	13.5	9.5	11.9	0.3	14.2	100.0
BR503	-	2,569	255	1400-1500	43.2	9.0	7.6	1.5	0.1	38.5	100.0
BR504	-	7,408	822	1700-1800	60.1	8.4	7.3	0.5	0.1	23.6	100.0

District : HULU LANGAT

BR604	-	56,316	3,913	2000-2100	68.0	10.2	3.0	0.5	0.5	17.8	100.0
BR605	-	11,890	1,043	0700-0800	55.6	10.7	6.8	5.1	0.7	21.1	100.0
BR608	-	26,810	1,990	0800-0900	48.6	15.6	9.6	2.1	0.8	23.3	100.0
BR609	-	56,026	4,511	1700-1800	60.1	5.6	2.5	0.8	1.1	29.8	100.0
BR610	-	13,113	1,302	0700-0800	49.9	11.2	12.0	4.3	0.6	21.9	100.0
BR611	-	17,767	2,136	1800-1900	51.9	11.2	8.3	4.5	0.6	23.4	100.0
BR612	-	15,844	1,486	1800-1900	62.9	11.9	5.7	1.4	0.8	17.3	100.0
BR613	-	641	77	0700-0800	36.5	20.1	13.3	5.3	0.2	24.6	100.0
BR614	-	76,519	7,810	0700-0800	61.7	10.3	6.5	1.4	0.6	19.4	100.0

District : HULU SELANGOR

BR701	-	13,646	1,237	0700-0800	73.0	5.1	5.6	3.0	1.1	12.2	100.0
BR702	-	14,372	1,294	1700-1800	56.7	13.1	8.9	2.8	0.9	17.6	100.0
BR703	-	926	102	1100-1200	47.9	12.0	6.6	1.5	0.9	31.1	100.0
BR704	-	18,624	1,800	1900-2000	70.4	7.9	5.1	1.6	1.4	13.6	100.0
BR705	-	8,348	993	1800-1900	53.0	15.5	6.4	0.7	0.2	24.2	100.0
BR706	-	9,350	772	1600-1700	61.0	9.8	8.4	2.0	1.5	17.3	100.0
BR707	-	7,341	902	1700-1800	54.3	18.0	3.5	1.0	1.2	22.0	100.0
BR708	-	7,087	1,566	0900-1000	66.5	9.5	4.1	0.4	0.9	18.6	100.0
BR709	-	7,178	625	1300-1400	49.7	12.0	7.9	1.4	1.6	27.4	100.0
BR710	-	1,197	136	1700-1800	40.2	16.8	8.1	2.8	1.7	30.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SELANGOR**

MARCH 2014

District : PETALING

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
BR801	-	161,206	15,213	1800-1900	68.8	6.2	2.3	0.4	0.1	22.1	100.0
BR802	-	178,363	16,386	0800-0900	74.8	4.5	2.5	0.7	0.2	17.2	100.0
BR803	-	96,211	8,308	0700-0800	66.2	8.2	6.9	1.8	0.6	16.4	100.0
BR804	-	140,382	22,214	1900-2000	54.6	0.5	0.2	0.1	0.1	44.6	100.0
BR806	-	216,387	19,018	0800-0900	67.3	6.5	5.9	1.0	0.7	18.6	100.0
BR807	384,550	299,906	22,008	0800-0900	77.8	4.7	3.1	0.3	0.5	13.7	100.0
BR809	-	180,652	15,828	0900-1000	89.6	3.3	3.2	0.3	0.3	3.3	100.0
BR811	-	18,073	2,614	0900-1000	72.6	5.4	5.5	0.2	0.1	16.2	100.0
BR812	-	110,550	13,198	1500-1600	69.1	9.1	6.1	6.3	0.3	9.1	100.0
BR813	-	97,232	7,413	1800-1900	59.0	6.5	4.9	4.7	0.2	24.5	100.0
BR814	-	106,850	8,375	1800-1900	63.5	11.0	3.1	0.7	0.2	21.5	100.0
BR815	-	116,792	10,308	1100-1200	89.7	4.5	0.4	0.2	0.2	5.0	100.0

District : GOMBAK

BR901	-	72,644	6,346	0700-0800	63.1	10.6	5.6	1.5	0.5	18.8	100.0
BR902	182,710	152,769	12,036	1600-1700	77.2	8.4	5.4	1.4	0.9	6.7	100.0
BR903	-	76,398	6,886	0700-0800	71.9	11.7	1.9	0.4	0.2	13.9	100.0
BR904	-	46,495	3,826	1300-1400	66.2	13.2	2.1	0.6	0.5	17.4	100.0
BR905	-	280,740	21,266	1800-1900	69.4	14.8	2.7	1.0	0.3	11.8	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SELANGOR**

SEPTEMBER 2014

District : SEPANG

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
BR004	-	65,478	6,180	0700-0800	64.0	12.2	4.5	3.5	0.6	15.2	100.0
BR005	-	36,672	3,921	1800-1900	59.5	14.3	7.3	6.1	0.8	12.0	100.0
BR006	-	18,763	1,795	0700-0800	60.7	15.9	5.9	2.3	0.9	14.2	100.0
BR007	-	91,896	12,120	1800-1900	80.1	5.5	3.0	2.2	1.1	8.0	100.0
BR008	-	16,643	1,703	0700-0800	65.2	5.9	6.1	5.6	0.4	16.7	100.0
BR009	-	13,477	1,782	0700-0800	74.1	9.2	2.9	0.7	0.3	12.9	100.0

District : KLANG

BR101	-	143,100	17,415	1400-1500	84.2	3.3	3.4	1.0	0.5	7.5	100.0
BR102	-	52,330	4,105	0800-0900	73.2	4.1	4.1	1.7	0.5	16.3	100.0
BR103	-	60,260	5,396	1700-1800	49.1	4.0	7.0	18.5	0.7	20.7	100.0
BR104	-	52,013	5,064	1900-2000	66.4	5.9	8.5	4.0	0.5	14.7	100.0
BR105	-	49,436	4,334	1800-1900	69.4	6.4	6.4	1.4	0.6	15.8	100.0
BR106	-	112,261	9,250	1700-1800	86.1	3.5	2.7	0.4	0.3	7.1	100.0
BR107	-	81,311	6,694	1700-1800	67.0	7.4	6.4	1.8	0.6	16.8	100.0
BR108	-	121,520	10,134	1800-1900	74.2	3.0	4.9	2.9	0.4	14.7	100.0
BR109	-	47,729	4,878	1800-1900	62.4	6.1	9.8	2.5	0.9	18.4	100.0
BR110	-	63,901	5,902	0800-0900	66.4	6.0	7.2	2.7	0.4	17.2	100.0
BR111	-	47,396	4,119	1900-2000	64.0	4.8	8.1	2.9	1.0	19.0	100.0

District : KUALA LANGAT

BR201	-	46,166	5,638	0700-0800	64.9	7.1	6.2	6.7	0.8	14.3	100.0
BR202	-	57,489	5,037	0700-0800	65.8	10.2	4.1	2.0	0.7	17.1	100.0
BR203	-	7,927	722	1300-1400	55.9	8.8	7.3	4.2	0.6	23.2	100.0
BR204	33,159	30,158	3,332	0700-0800	53.2	12.5	6.5	10.4	0.4	17.1	100.0

District : KUALA SELANGOR

BR401	-	47,260	4,985	1200-1300	51.6	13.0	9.7	9.0	1.4	15.3	100.0
BR402	-	19,614	2,037	1800-1900	55.4	9.9	9.4	8.5	0.9	15.9	100.0
BR403	-	2,661	285	0700-0800	40.9	9.4	17.7	9.8	0.1	22.1	100.0
BR404	-	18,869	2,079	0700-0800	64.6	7.5	4.6	0.8	0.6	21.9	100.0
BR405	-	22,126	2,862	0700-0800	47.8	14.7	11.7	8.4	0.7	16.7	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SELANGOR**

SEPTEMBER 2014

District : SABAK BERNAM

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
BR501	25,209	21,958	1,905	1700-1800	64.6	8.3	8.5	5.4	0.4	12.8	100.0
BR502	-	15,343	1,544	1700-1800	49.5	11.8	10.7	12.8	0.4	14.8	100.0
BR503	-	2,367	193	1700-1800	44.6	6.9	3.3	2.7	0.1	42.5	100.0
BR504	-	7,434	830	1700-1800	59.7	9.0	8.6	0.6	0.2	21.8	100.0

District : HULU LANGAT

BR604	-	52,127	3,877	0800-0900	67.5	10.8	3.6	0.7	0.4	17.0	100.0
BR605	-	12,107	1,218	0700-0800	53.8	12.0	7.5	5.5	0.9	20.3	100.0
BR608	-	30,335	2,638	0700-0800	51.9	13.3	7.3	2.9	0.6	23.9	100.0
BR609	-	51,929	4,754	1500-1600	68.0	5.7	2.9	0.5	1.2	21.7	100.0
BR610	-	9,127	1,104	0700-0800	40.2	14.3	12.8	6.2	0.6	25.8	100.0
BR611	-	17,341	1,935	1800-1900	57.1	12.8	6.7	5.1	0.6	17.7	100.0
BR612	-	17,612	1,835	0800-0900	64.2	12.0	5.4	1.3	0.6	16.4	100.0
BR613	-	564	51	0700-0800	40.6	20.9	13.1	5.0	0.0	20.4	100.0
BR614	-	90,139	8,924	1800-1900	57.1	11.4	6.3	1.6	0.5	23.3	100.0

District : HULU SELANGOR

BR701	-	16,397	1,429	0700-0800	71.4	5.8	5.8	4.5	1.3	11.2	100.0
BR702	-	12,740	1,056	0700-0800	62.3	10.4	7.0	2.9	0.9	16.5	100.0
BR703	-	2,218	208	1300-1400	40.3	17.0	8.4	0.8	0.5	33.1	100.0
BR704	-	15,941	1,371	0800-0900	54.7	11.4	10.3	5.0	1.4	17.1	100.0
BR705	-	9,325	971	1800-1900	55.0	15.0	6.6	0.5	0.2	22.7	100.0
BR706	-	10,297	1,614	1100-1200	63.5	11.0	7.5	1.3	1.5	15.1	100.0
BR707	-	7,469	690	2000-2100	52.0	18.6	4.3	1.8	1.4	21.9	100.0
BR708	-	11,484	4,538	1200-1300	43.9	7.3	2.2	0.2	0.6	45.9	100.0
BR709	-	7,439	611	1500-1600	54.2	13.8	6.7	0.9	1.6	22.8	100.0
BR710	-	1,345	234	1100-1200	34.9	13.2	6.3	1.9	1.1	42.6	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SELANGOR**

SEPTEMBER 2014

District : PETALING

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
BR801	-	77,407	8,466	0700-0800	78.0	3.6	1.1	0.6	0.1	16.7	100.0
BR802	-	277,962	24,244	1700-1800	88.3	2.8	0.3	0.3	0.1	8.2	100.0
BR803	-	133,483	15,266	0800-0900	63.1	11.5	3.7	2.5	0.5	18.7	100.0
BR804	-	86,179	7,035	1600-1700	60.6	9.9	7.4	1.6	0.4	20.1	100.0
BR806	-	283,410	21,439	1000-1100	67.0	14.5	3.3	0.7	0.5	14.0	100.0
BR807	494,952	414,158	33,600	1800-1900	80.1	5.2	3.2	0.5	0.3	10.7	100.0
BR809	-	200,896	17,321	0900-1000	89.3	3.5	3.1	0.3	0.3	3.6	100.0
BR811	-	20,000	3,193	0700-0800	65.7	8.4	5.9	0.6	0.2	19.2	100.0
BR812	-	91,337	8,610	1000-1100	81.6	7.1	1.1	0.9	0.1	9.1	100.0
BR813	-	106,812	7,957	1100-1200	60.6	6.8	5.5	4.7	0.3	22.1	100.0
BR814	-	81,958	6,544	1800-1900	68.4	9.5	2.2	0.3	0.1	19.4	100.0
BR815	-	156,916	8,234	0700-0800	70.6	9.7	5.6	0.7	0.3	13.1	100.0

District : GOMBAK

BR901	-	59,735	4,783	1200-1300	73.0	10.2	5.2	0.7	0.5	10.4	100.0
BR902	162,885	135,846	11,268	1700-1800	75.2	8.0	5.0	1.7	0.7	9.5	100.0
BR903	-	91,853	11,490	0700-0800	69.8	12.3	3.8	0.3	0.2	13.5	100.0
BR904	-	14,268	1,409	0700-0800	38.3	17.1	9.0	6.8	1.1	27.7	100.0
BR905	-	245,981	25,739	0800-0900	71.4	14.7	4.1	0.8	0.3	8.7	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SELANGOR**

AVERAGE 2014

District : SEPANG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
BR004	63,597	6,075	63.7	11.6	4.7	4.5	0.6	14.9	F
BR005	36,159	3,423	63.2	11.6	6.8	5.3	1.0	12.0	F
BR006	20,847	1,987	66.2	14.0	4.4	1.4	0.8	13.1	F
BR007	87,554	9,610	82.3	5.4	2.8	2.0	1.1	6.5	E
BR008	31,675	1,931	61.7	7.0	6.7	5.6	0.5	18.5	F
BR009	27,566	1,793	70.5	10.2	3.3	0.8	0.3	14.9	E

District : KLANG

BR101	133,087	14,234	82.1	3.9	3.6	0.9	0.6	8.9	F
BR102	52,563	4,131	72.9	4.1	4.1	1.6	1.0	16.2	A
BR103	58,071	5,512	46.2	3.8	7.3	18.2	0.7	23.8	F
BR104	48,641	4,399	64.0	5.3	9.0	4.7	0.5	16.5	B
BR105	44,669	4,022	68.5	6.9	6.2	1.5	1.4	15.5	D
BR106	108,228	9,123	86.6	2.9	2.3	0.4	0.3	7.5	F
BR107	108,033	8,954	67.7	6.1	6.8	2.7	1.2	15.6	F
BR108	128,676	10,736	71.4	3.8	6.1	3.2	1.1	14.5	F
BR109	43,584	4,744	63.1	5.4	9.2	2.1	0.8	19.4	F
BR110	56,743	5,288	63.4	5.9	7.6	2.8	0.5	19.9	F
BR111	43,244	3,990	62.6	4.7	9.9	3.3	1.1	18.4	F

District : KUALA LANGAT

BR201	44,922	5,342	60.3	9.1	7.5	7.1	0.7	15.3	F
BR202	55,501	5,212	66.7	7.8	4.1	2.5	0.9	17.9	F
BR203	7,741	706	55.5	10.0	7.5	3.5	0.6	22.9	A
BR204	29,535	3,475	55.8	10.9	6.1	10.0	0.5	16.7	F

District : KUALA SELANGOR

BR401	46,517	4,490	52.1	12.5	9.5	8.8	1.2	15.8	F
BR402	23,605	3,052	56.0	9.8	8.1	8.1	0.8	17.2	C
BR403	3,154	326	40.7	10.5	17.3	9.1	0.2	22.2	A
BR404	19,427	1,974	65.3	8.1	4.2	0.7	0.5	21.1	F
BR405	22,618	2,589	49.2	13.0	11.5	8.5	0.8	17.0	C

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SELANGOR**

AVERAGE 2014

District : SABAK BERNAM

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
BR501	22,443	2,014	66.7	7.4	8.4	5.3	0.4	11.9	A
BR502	16,161	1,524	50.1	12.7	10.1	12.3	0.4	14.5	A
BR503	2,468	224	43.9	8.0	5.4	2.1	0.1	40.5	A
BR504	7,421	826	59.9	8.7	8.0	0.5	0.2	22.7	A

District : HULU LANGAT

BR604	54,222	3,895	67.7	10.5	3.3	0.6	0.4	17.4	F
BR605	11,999	1,131	54.7	11.4	7.1	5.3	0.8	20.7	C
BR608	28,572	2,314	50.2	14.5	8.4	2.5	0.7	23.6	F
BR609	53,977	4,633	64.1	5.7	2.7	0.6	1.2	25.8	F
BR610	11,120	1,203	45.0	12.8	12.4	5.3	0.6	23.9	E
BR611	17,554	2,036	54.5	12.0	7.5	4.8	0.6	20.6	F
BR612	16,728	1,661	63.5	11.9	5.6	1.3	0.7	16.9	A
BR613	603	64	38.6	20.5	13.2	5.1	0.1	22.5	A
BR614	83,329	8,367	59.4	10.8	6.4	1.5	0.5	21.4	F

District : HULU SELANGOR

BR701	15,022	1,333	72.2	5.4	5.7	3.7	1.2	11.7	A
BR702	13,556	1,175	59.5	11.7	8.0	2.9	0.9	17.1	A
BR703	1,572	155	44.1	14.5	7.5	1.1	0.7	32.1	A
BR704	17,283	1,586	62.5	9.7	7.7	3.3	1.4	15.3	F
BR705	8,836	982	54.0	15.3	6.5	0.6	0.2	23.4	B
BR706	9,824	1,193	62.2	10.4	8.0	1.7	1.5	16.2	A
BR707	7,405	796	53.1	18.3	3.9	1.4	1.3	22.0	A
BR708	9,286	3,052	55.2	8.4	3.1	0.3	0.7	32.2	F
BR709	7,309	618	51.9	12.9	7.3	1.2	1.6	25.1	A
BR710	1,271	185	37.6	15.0	7.2	2.3	1.4	36.5	A

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SELANGOR**

AVERAGE 2014

District : PETALING

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
BR801	119,307	11,840	73.4	4.9	1.7	0.5	0.1	19.4	F
BR802	228,163	20,315	81.6	3.7	1.4	0.5	0.1	12.7	F
BR803	114,847	11,787	64.6	9.8	5.3	2.1	0.5	17.6	F
BR804	113,281	14,625	57.6	5.2	3.8	0.9	0.2	32.3	F
BR806	249,898	20,228	67.2	10.5	4.6	0.9	0.6	16.3	F
BR807	357,032	27,804	79.0	4.9	3.1	0.4	0.4	12.2	F
BR809	190,774	16,575	89.5	3.4	3.1	0.3	0.3	3.4	F
BR811	19,037	2,904	69.2	6.9	5.7	0.4	0.1	17.7	F
BR812	100,944	10,904	75.3	8.1	3.6	3.6	0.2	9.1	F
BR813	102,022	7,685	59.8	6.7	5.2	4.7	0.3	23.3	D
BR814	94,404	7,460	66.0	10.2	2.6	0.5	0.2	20.5	F
BR815	136,854	9,271	80.2	7.1	3.0	0.5	0.3	9.1	F

District : GOMBAK

BR901	66,189	5,565	68.0	10.4	5.4	1.1	0.5	14.6	F
BR902	144,308	11,652	76.2	8.2	5.2	1.5	0.8	8.1	F
BR903	84,126	9,188	70.9	12.0	2.9	0.4	0.2	13.7	F
BR904	30,382	2,618	52.2	15.2	5.6	3.7	0.8	22.5	F
BR905	263,361	23,503	70.4	14.8	3.4	0.9	0.3	10.2	F

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SELANGOR**

District : SEPANG

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
BR004	27,556	34,125	35,867	36,575	44,072	53,252	53,673	51,485	57,683	63,597	8.70	0.93
BR005	20,923	22,052	27,411	21,878	32,971	24,946	28,140	29,373	32,280	36,159	5.10	0.67
BR006	11,844	12,174	13,735	14,621	15,838	17,256	19,603	17,011	26,643	20,847	7.64	0.85
BR007	-	-	-	-	-	68,166	80,875	64,854	91,523	87,554	6.24	0.42
BR008	-	-	-	-	-	17,904	16,655	33,969	33,908	31,675	18.52	0.66
BR009	-	-	-	-	-	14,750	13,561	23,471	30,621	27,566	20.65	0.78

District : KLANG

BR101	149,618	139,732	123,437	94,591	104,201	103,515	91,005	128,931	142,038	133,087	-0.50	0.01
BR102	45,006	35,132	42,452	47,817	46,690	52,901	53,983	57,835	56,513	52,563	4.10	0.66
BR103	86,646	100,782	71,212	55,135	71,532	66,090	71,297	68,957	65,872	58,071	-3.70	0.40
BR104	40,680	42,422	35,940	59,230	52,893	53,429	56,127	56,044	52,447	48,641	3.13	0.33
BR105	36,089	33,878	32,363	38,562	41,338	44,030	46,574	45,911	46,587	44,669	3.96	0.76
BR106	59,544	65,782	63,473	76,439	79,057	94,404	118,734	101,095	96,518	108,228	7.20	0.82
BR107	66,014	74,325	73,095	72,095	91,094	90,918	89,381	94,676	94,351	108,033	4.87	0.88
BR108	111,393	109,893	115,023	129,408	122,468	141,121	135,678	140,780	143,223	128,676	2.69	0.66
BR109	37,133	37,916	39,311	37,321	36,315	32,174	34,501	35,025	37,540	43,584	0.27	0.01
BR110	36,442	37,946	37,081	39,130	40,798	39,588	42,084	43,890	44,564	56,743	3.72	0.76
BR111	37,169	41,899	37,938	40,515	47,543	40,677	44,995	38,626	41,693	43,244	0.96	0.14

District : KUALA LANGAT

BR201	34,379	38,153	37,772	38,597	41,048	41,443	48,678	35,126	37,352	44,922	1.58	0.20
BR202	54,375	61,456	56,532	52,459	55,814	52,429	56,444	53,809	64,219	55,501	0.24	0.01
BR203	6,311	6,709	6,324	6,711	7,023	7,101	6,852	7,128	7,777	7,741	2.15	0.82
BR204	22,930	24,064	25,319	26,203	27,159	29,916	29,299	32,117	31,669	29,535	3.53	0.86

District : KUALA SELANGOR

BR401	25,126	30,750	35,745	39,750	43,210	34,266	35,376	34,238	35,485	46,517	3.48	0.37
BR402	27,400	15,736	18,657	16,825	16,866	16,133	16,686	19,872	22,195	23,605	0.79	0.02
BR403	2,874	2,339	2,789	2,554	2,751	3,379	3,126	3,438	3,110	3,154	2.84	0.49
BR404	9,057	10,521	9,815	11,377	13,014	13,263	12,848	14,132	12,750	19,427	6.32	0.79
BR405	20,593	21,287	20,631	19,332	20,938	22,822	23,003	23,648	21,278	22,618	1.29	0.39

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SELANGOR**

District : SABAK BERNAM

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
BR501	15,230	17,455	18,224	17,354	19,773	20,466	21,743	23,370	22,174	22,443	4.31	0.88
BR502	11,518	12,935	12,118	12,676	16,100	15,806	16,081	15,892	15,046	16,161	3.73	0.69
BR503	4,833	3,821	3,614	3,666	3,101	2,893	2,849	2,453	2,487	2,468	-7.20	0.92
BR504	5,285	5,385	4,665	2,516	4,671	7,330	7,664	7,410	6,649	7,421	6.45	0.32

District : HULU LANGAT

BR604	53,115	56,808	42,272	57,286	58,929	56,609	57,591	53,689	59,023	54,222	0.98	0.09
BR605	13,480	14,513	14,178	13,538	13,960	11,834	11,927	11,947	11,341	11,999	-2.50	0.71
BR608	42,582	40,380	38,656	37,338	38,264	33,086	28,098	27,617	27,877	28,572	-5.40	0.89
BR609	40,045	37,839	30,474	41,555	40,369	50,648	54,987	62,314	56,205	53,977	6.12	0.68
BR610	11,291	10,688	12,805	15,335	6,815	11,424	12,860	12,222	11,525	11,120	0.09	0.00
BR611	9,067	5,784	6,538	9,051	10,155	15,392	14,877	16,207	18,778	17,554	12.51	0.80
BR612	6,030	5,699	5,913	5,858	7,864	10,737	11,973	13,654	15,346	16,728	13.79	0.92
BR613	837	1,080	906	924	972	789	830	691	488	603	-6.30	0.64
BR614	34,798	35,666	36,043	62,612	63,914	65,123	66,174	70,499	79,801	83,329	10.32	0.85

District : HULU SELANGOR

BR701	9,396	9,896	9,723	12,307	13,209	18,293	13,430	13,320	15,082	15,022	5.66	0.62
BR702	11,853	11,257	12,476	13,464	13,308	14,827	12,429	10,994	12,624	13,556	0.76	0.06
BR703	1,687	1,429	1,383	986	1,134	1,123	1,073	1,703	1,267	1,572	-0.10	0.00
BR704	23,371	19,388	19,665	17,387	16,508	10,307	26,689	23,697	16,769	17,283	-1.20	0.02
BR705	9,664	7,203	8,326	6,041	7,186	8,785	8,147	8,172	8,240	8,836	0.69	0.02
BR706	6,602	12,195	11,404	9,985	10,764	8,297	10,525	12,997	12,144	9,824	2.48	0.14
BR707	4,004	3,836	4,674	5,336	4,228	4,504	5,047	7,131	6,677	7,405	6.92	0.76
BR708	7,350	8,788	7,209	7,599	7,287	6,928	7,951	7,211	8,415	9,286	1.14	0.13
BR709	8,046	10,794	8,215	8,837	8,433	7,189	8,276	9,591	6,126	7,309	-2.70	0.27
BR710	1,591	2,254	1,010	909	946	807	1,248	1,410	5,309	1,271	3.90	0.05

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SELANGOR**

District : PETALING

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
BR801	123,195	83,329	88,809	131,808	178,059	206,864	207,643	146,240	156,700	119,307	4.93	0.22
BR802	84,909	72,688	71,927	89,164	80,427	95,650	142,062	150,838	176,171	228,163	12.34	0.84
BR803	107,904	34,173	63,989	72,350	91,091	94,410	101,892	109,350	140,230	114,847	8.60	0.42
BR804	83,671	60,021	71,940	100,452	102,542	142,364	68,660	130,436	128,947	113,281	6.21	0.39
BR806	236,222	265,787	224,828	250,359	292,856	274,278	281,803	280,347	242,844	249,898	0.77	0.07
BR807	365,570	353,438	454,874	394,821	337,370	369,479	313,431	349,936	348,056	357,032	-1.40	0.17
BR809	227,211	123,962	238,130	81,330	172,931	158,945	157,546	203,738	163,442	190,774	0.90	0.01
BR811	15,075	3,609	9,554	12,368	15,865	17,487	18,609	16,372	20,525	19,037	11.08	0.42
BR812	101,677	115,106	194,263	189,045	108,030	106,137	129,074	102,649	149,789	100,944	-1.60	0.03
BR813	113,199	85,067	83,556	107,642	121,609	91,437	122,191	221,495	72,274	102,022	1.75	0.03
BR814	156,924	68,540	67,472	68,934	82,000	78,876	60,675	112,538	98,459	94,404	0.06	0.00
BR815	-	128,236	112,122	112,600	65,762	133,701	109,705	133,308	167,137	136,854	3.85	0.17

District : GOMBAK

BR901	93,476	74,016	73,100	69,161	70,271	85,300	82,766	83,885	81,958	66,189	-0.60	0.03
BR902	146,831	141,362	159,324	137,870	150,213	129,345	144,334	151,486	147,449	144,308	-0.08	0.00
BR903	70,473	161,988	50,963	62,931	62,126	77,375	139,717	93,510	78,087	84,126	1.29	0.01
BR904	12,750	12,604	15,546	13,038	15,214	16,004	13,897	15,104	14,795	30,382	5.48	0.43
BR905	143,942	134,311	148,278	192,982	150,585	164,292	276,234	271,289	242,876	263,361	8.34	0.75

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

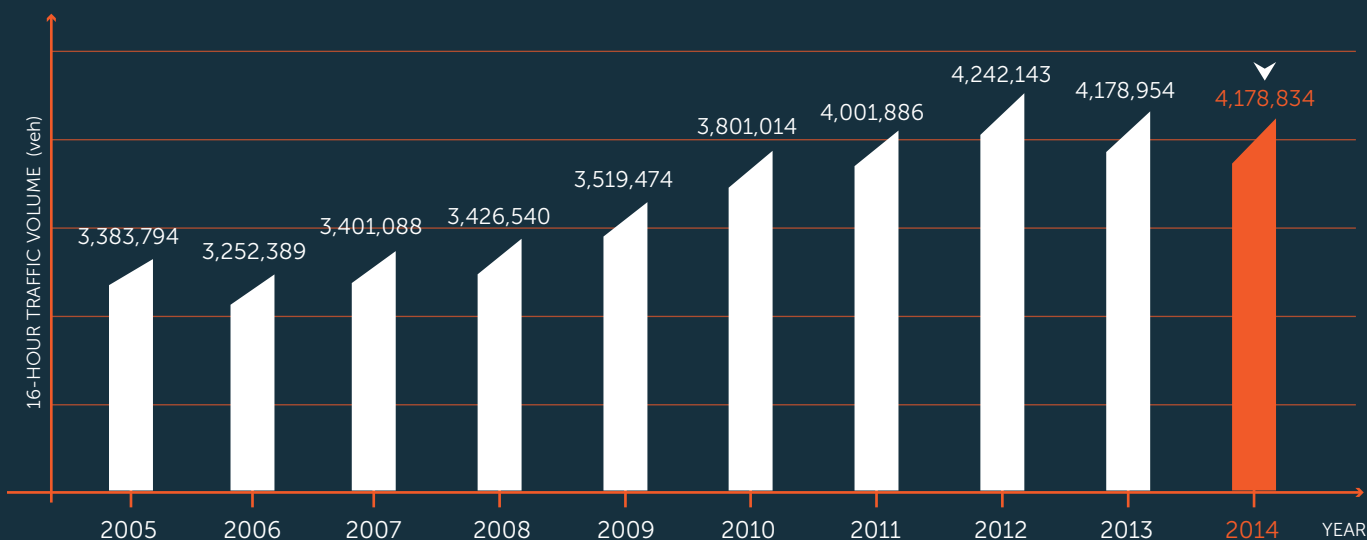


Figure 3.5-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Selangor



There are 66 census stations in Selangor. The 16-hour traffic volume documented in year 2014 has seen not much difference compared to the year 2013 in Selangor. Pattern has seen mostly steady growth, except the decreases of 3.88% in 2006, and 1.49% in 2013.

0.00%
EQUAL TO
2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

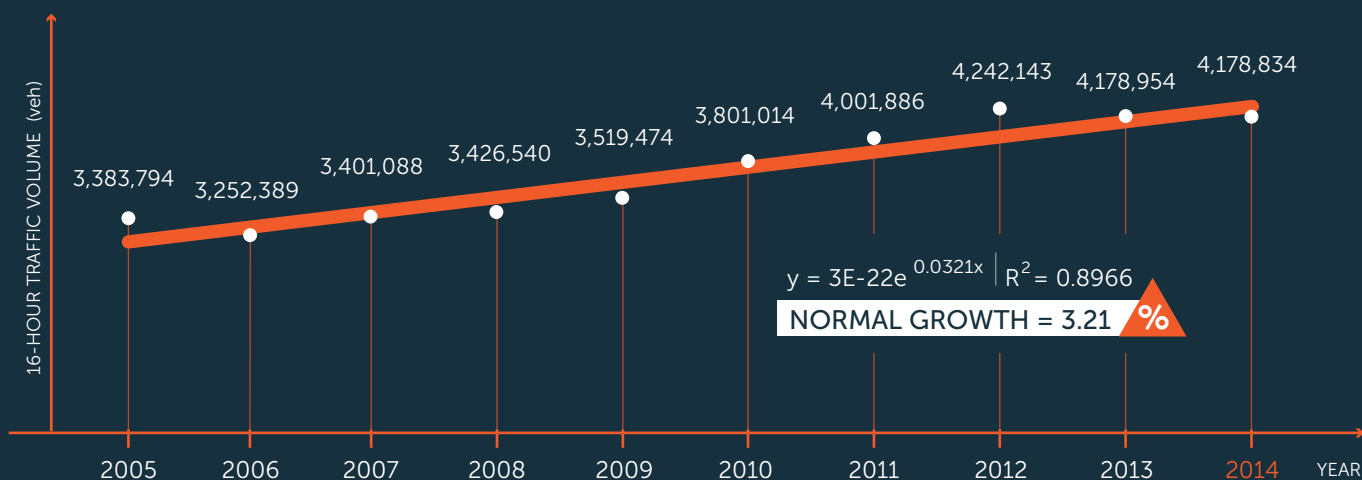
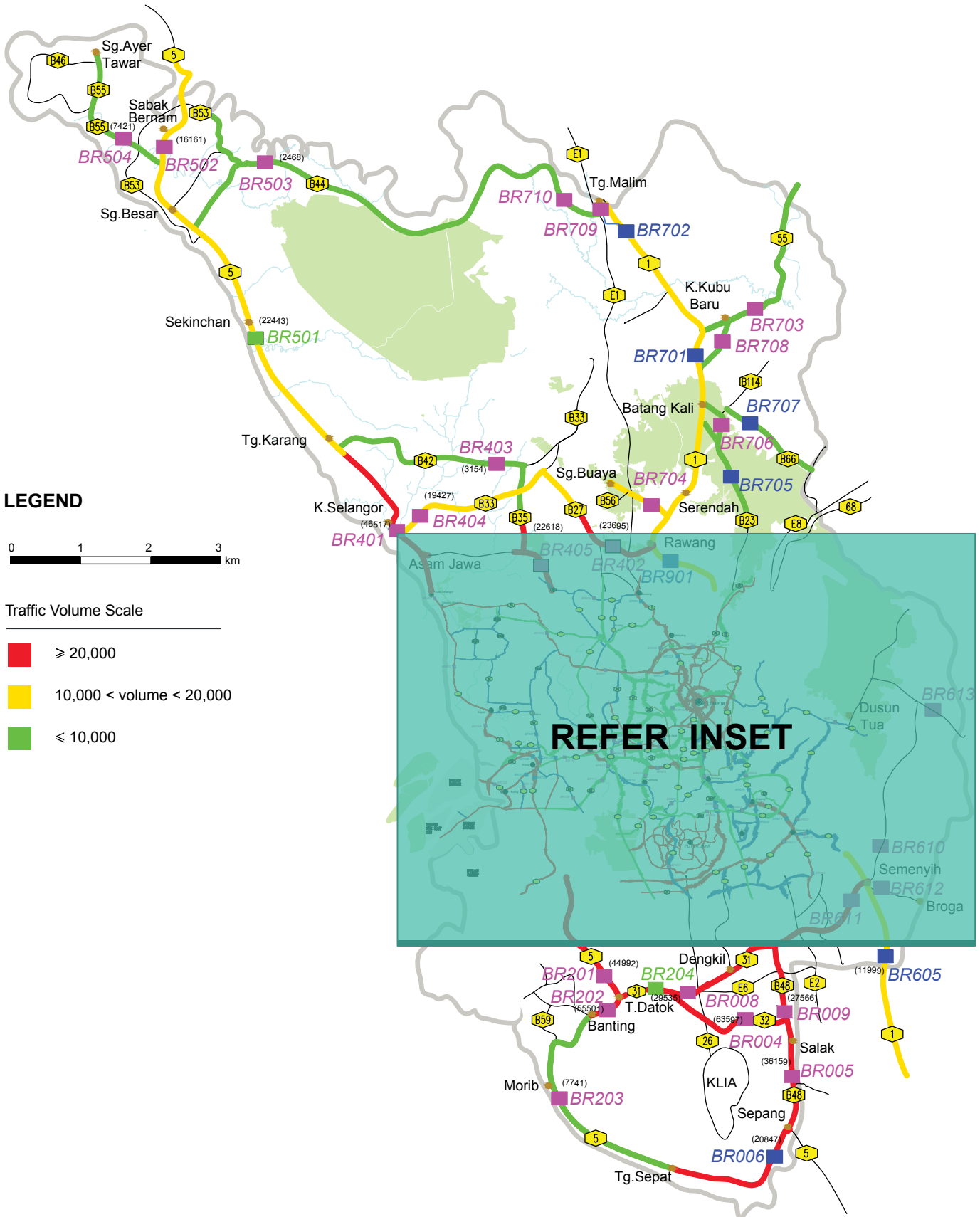


Figure 3.5-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Selangor

Traffic growth rate recorded for the state of Selangor is 3.21% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Selangor.

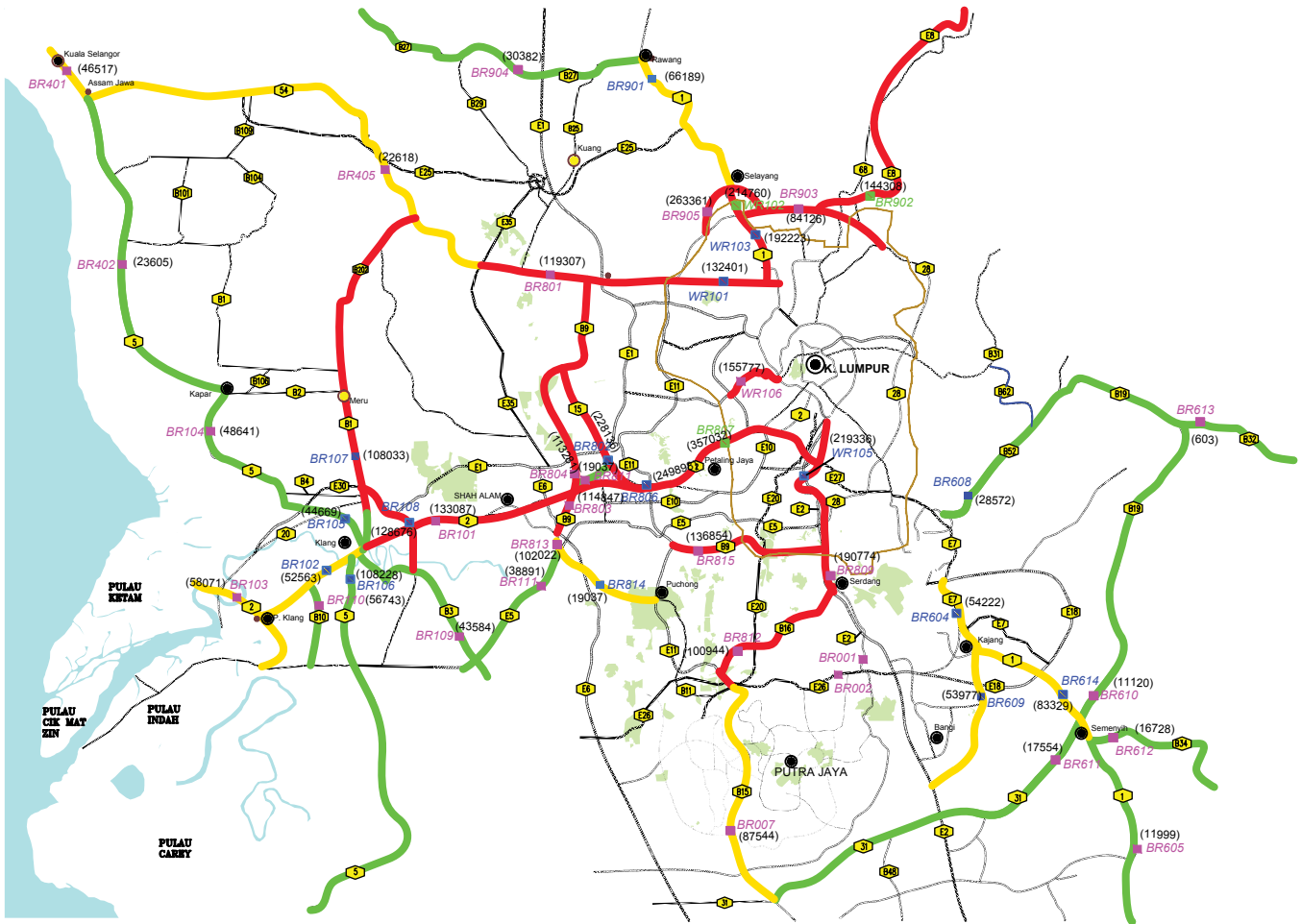
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **SELANGOR**

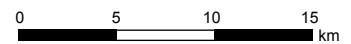


AVERAGE 16-HOUR TRAFFIC VOLUME MAP

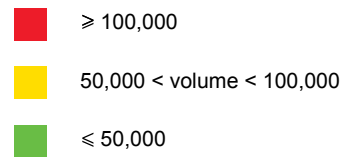
STATE : **SELANGOR (INSET)**



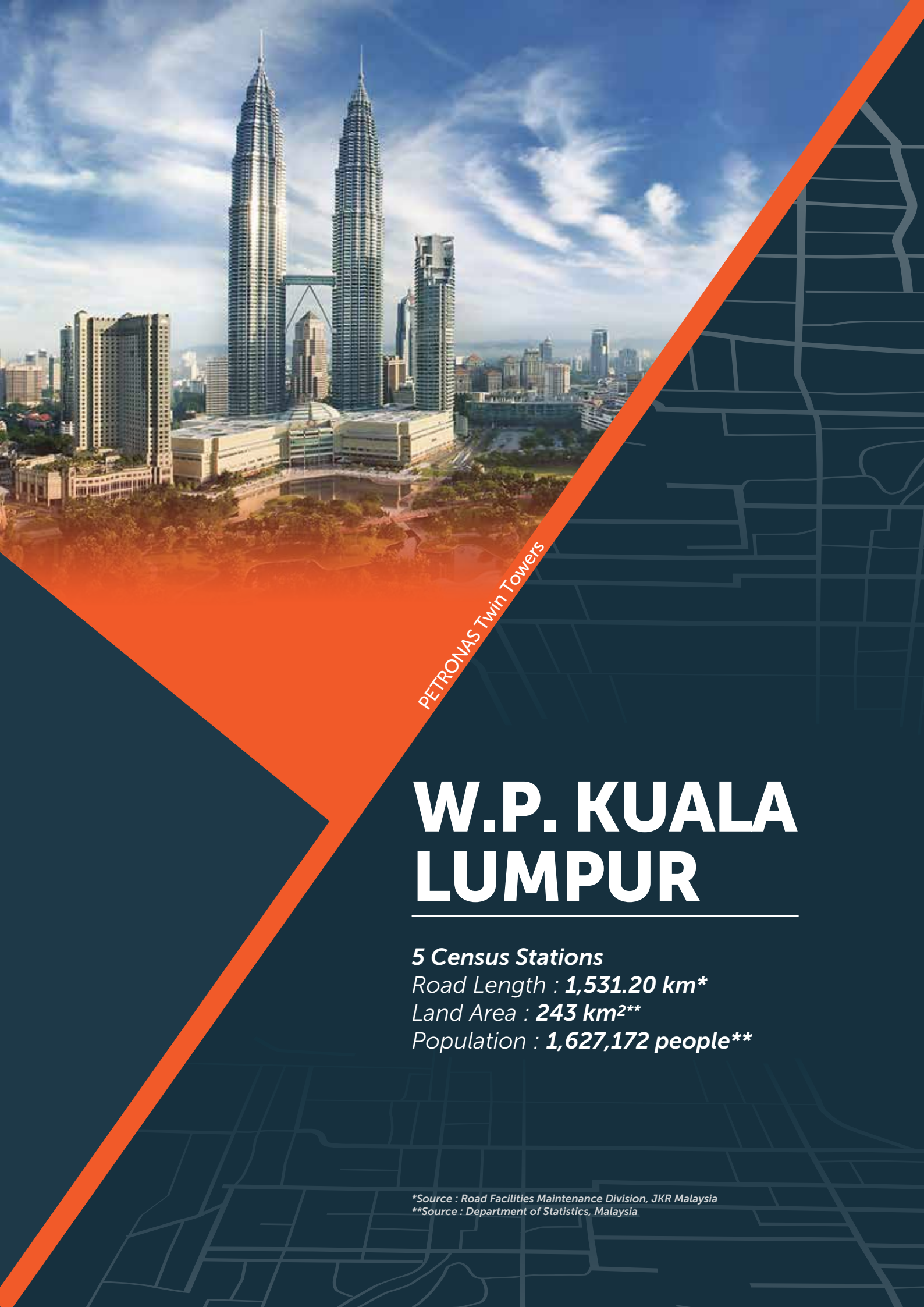
LEGEND



Traffic Volume Scale







PETRONAS Twin Towers

W.P. KUALA LUMPUR

5 Census Stations

Road Length : **1,531.20 km***

Land Area : **243 km²****

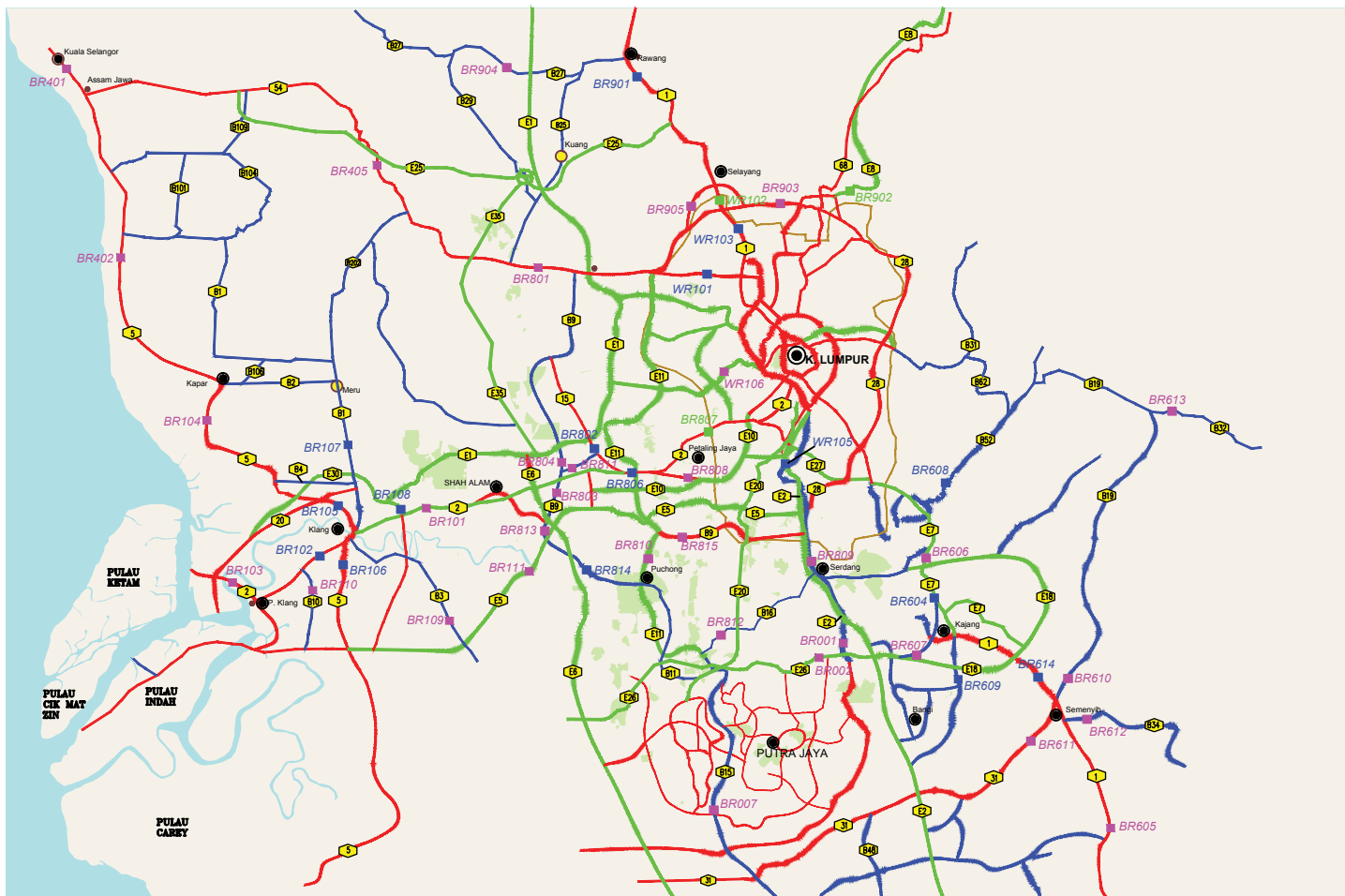
Population : **1,627,172 people****

*Source : Road Facilities Maintenance Division, JKR Malaysia

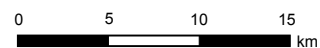
**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **W.P. KUALA LUMPUR**

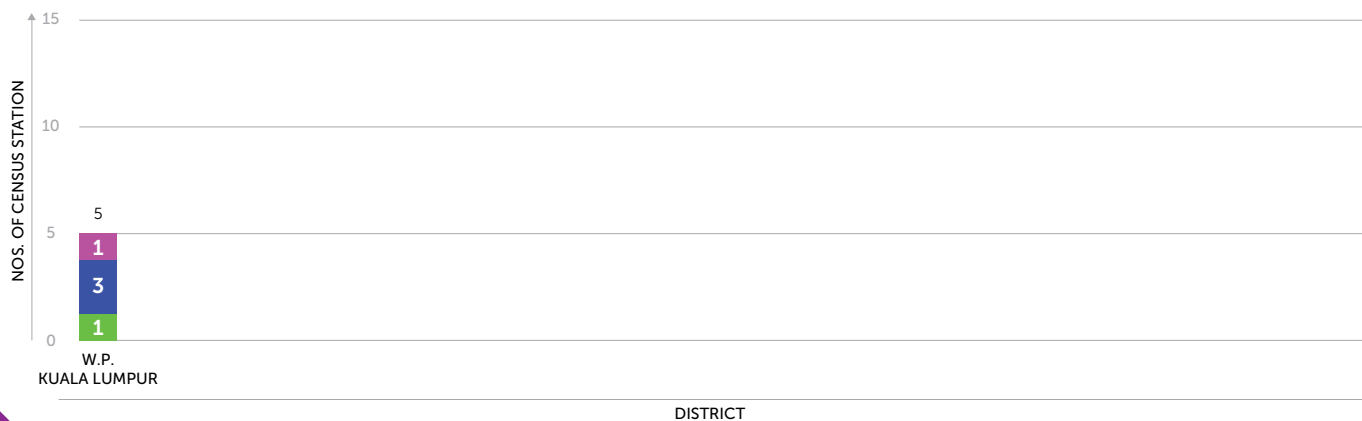


LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **W.P. KUALA LUMPUR**

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
WR101	1	54	8.9	Kuala Lumpur - Kuala Selangor (Jalan Kepong)	N : 3° 12' 18.7" E : 101° 40' 02.5"	Dual	6
WR102	0	1	12.1	Kuala Lumpur - Ipoh	N : 3° 14' 08.4" E : 101° 40' 17.3"	Dual	6
WR103	1	1	8.1	Kuala Lumpur - Ipoh	N : 3° 13' 22.6" E : 101° 40' 10.9"	Dual	6
WR105	1	E2	8.1	Kuala Lumpur - Seremban Expressway	N : 3° 04' 32.0" E : 101° 42' 08.4"	Dual	6
WR106	3	W106	5.8	Kuala Lumpur - Damansara	N : 3° 08' 17.3" E : 101° 39' 28.0"	Dual	6

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **W.P. KUALA LUMPUR**

MARCH 2014

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
WR101	-	133,180	9,415	0900-1000	67.0	8.9	2.0	0.2	0.7	21.2	100.0
WR102	263,458	220,498	17,169	1100-1200	65.3	5.9	6.1	1.0	0.6	21.0	100.0
WR103	-	204,589	16,281	1800-1900	75.7	4.4	4.5	0.5	0.5	14.3	100.0
WR105	-	212,224	15,444	1800-1900	80.4	6.4	3.3	0.9	0.9	8.2	100.0
WR106	-	154,166	13,367	1200-1300	77.9	4.7	0.9	0.2	0.2	16.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **W.P. KUALA LUMPUR**

SEPTEMBER 2014

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
WR101	-	131,623	10,979	0800-0900	69.7	6.5	3.0	0.5	0.8	19.6	100.0
WR102	266,967	209,022	15,087	1800-1900	69.8	7.1	6.1	1.1	0.5	15.4	100.0
WR103	-	179,858	12,637	1100-1200	71.1	8.2	5.3	0.6	0.6	14.2	100.0
WR105	-	226,449	19,619	1700-1800	77.0	6.8	3.6	0.9	0.7	11.0	100.0
WR106	-	157,388	16,044	0800-0900	80.1	5.0	0.9	0.1	0.1	13.8	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **W.P. KUALA LUMPUR**

AVERAGE 2014

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
WR101	132,401	10,197	68.4	7.7	2.5	0.3	0.7	20.4	E
WR102	214,760	16,128	67.5	6.5	6.1	1.0	0.6	18.2	F
WR103	192,223	14,459	73.4	6.3	4.9	0.6	0.5	14.3	F
WR105	219,336	17,531	78.7	6.6	3.5	0.9	0.8	9.6	F
WR106	155,777	14,706	79.0	4.8	0.9	0.1	0.2	15.0	F

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **W.P. KUALA LUMPUR**

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
WR101	131,161	129,092	132,245	138,727	190,272	153,564	136,860	139,737	160,694	132,401	0.99	0.06
WR102	155,016	150,874	158,754	161,161	214,746	277,797	276,092	252,341	253,179	214,760	6.51	0.62
WR103	185,828	206,484	203,986	205,867	194,287	196,796	209,224	203,277	216,424	192,223	0.41	0.08
WR105	226,019	244,417	258,867	229,713	213,522	201,260	192,649	213,161	206,140	219,336	-1.80	0.39
WR106	274,154	245,799	290,967	270,123	239,685	253,903	225,435	204,487	161,751	155,777	-6.20	0.77

STATISTIC FOR YEAR 2014

STATE : **W.P. KUALA LUMPUR**

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

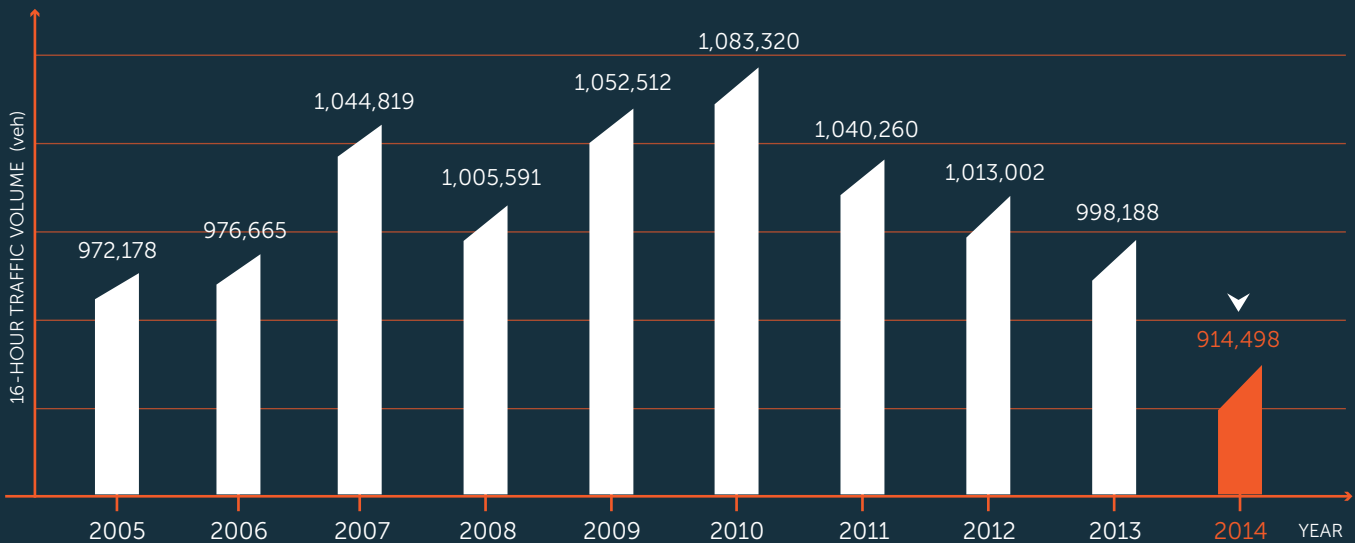


Figure 3.6-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in W.P. Kuala Lumpur



There are 5 census stations in W.P. Kuala Lumpur, the smallest amount of census station among the 14 states in Malaysia. The 16-hour traffic volume documented since year 2005 to 2014 shows extreme rate intervals in W.P. Kuala Lumpur. There were 972,178 vehicles on the road in 2005, traffic growth rate peaked in 2010 to 1,083,320 vehicles on the road. However, since then the growth started dropping rapidly. For year 2014, the amount has decreased up to 8.38%.

-8.38%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

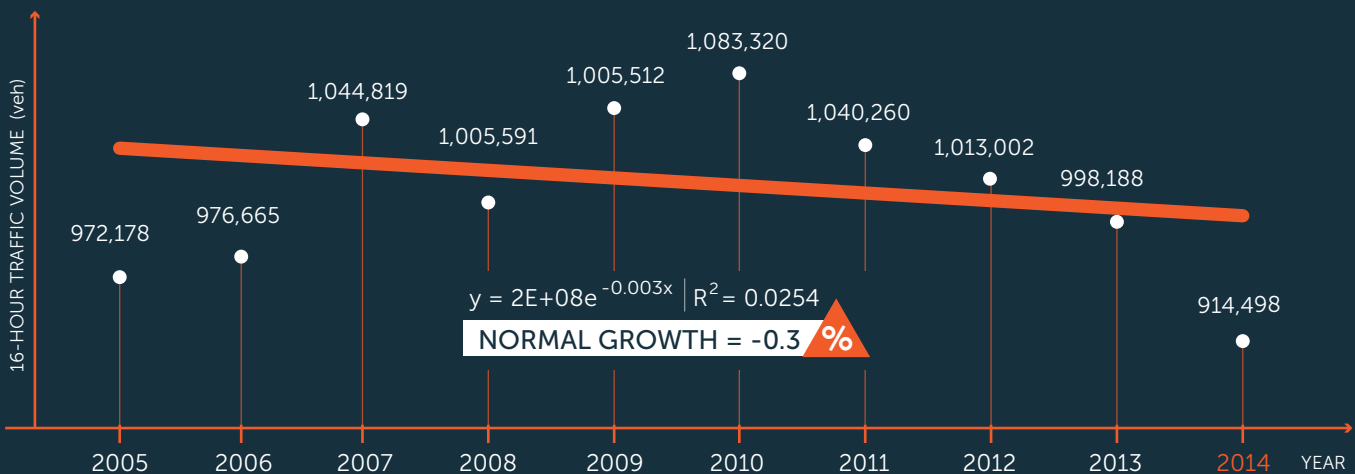
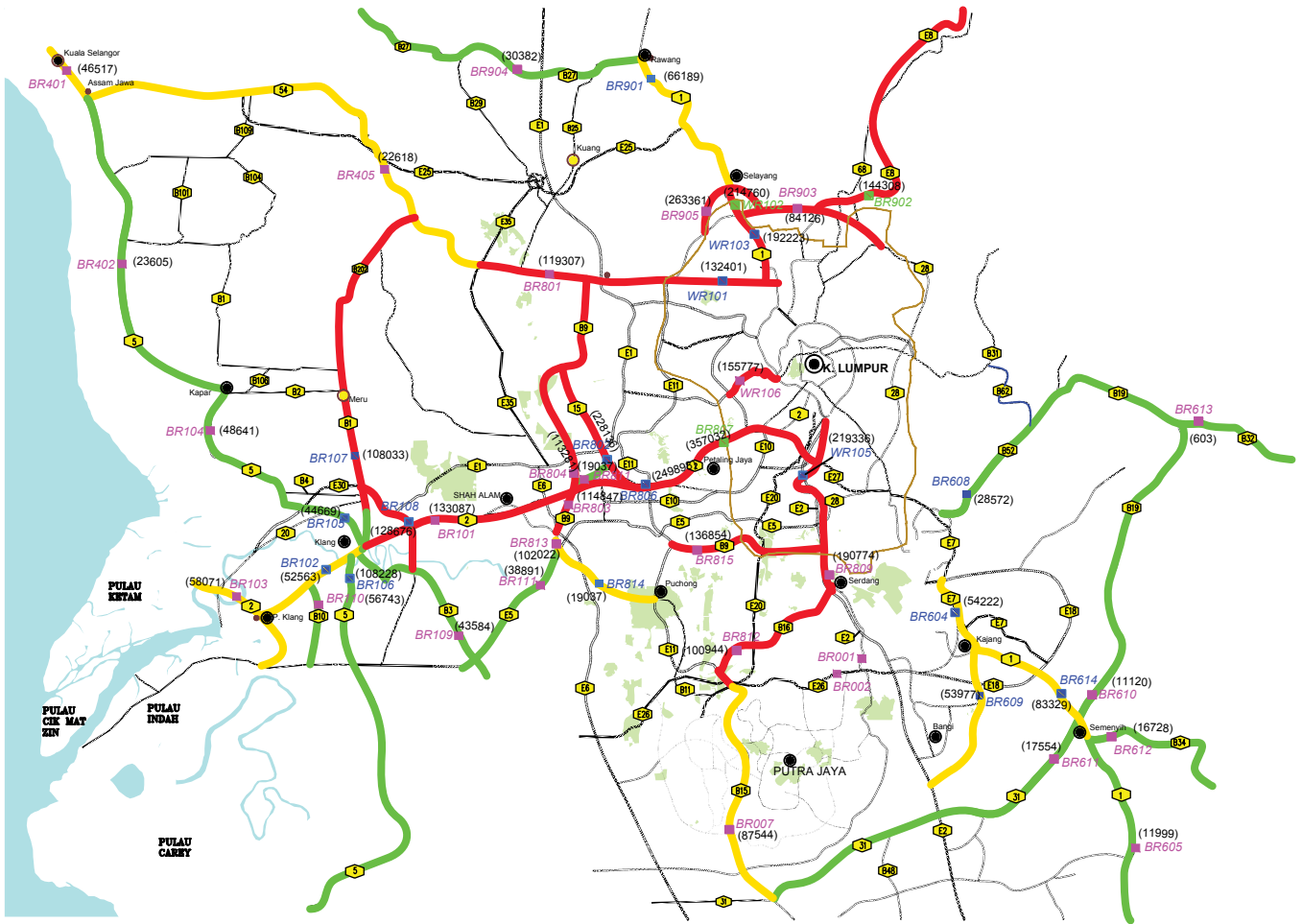


Figure 3.6-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in W.P. Kuala Lumpur

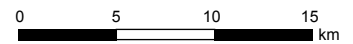
Traffic growth rate recorded for the state of W.P. Kuala Lumpur is -0.3% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in W.P. Kuala Lumpur.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **W.P. KUALA LUMPUR**



LEGEND



Traffic Volume Scale

- $\geq 100,000$
- $50,000 < \text{volume} < 100,000$
- $\leq 50,000$





Istana Lama Seri Menanti, Kuala Pilah

NEGERI SEMBILAN

DARUL KHUSUS

48 Census Stations

Road Length : **11,816.33 km***

Land Area : **6,686 km²****

Population : **997,071 people****

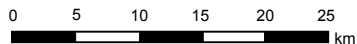
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

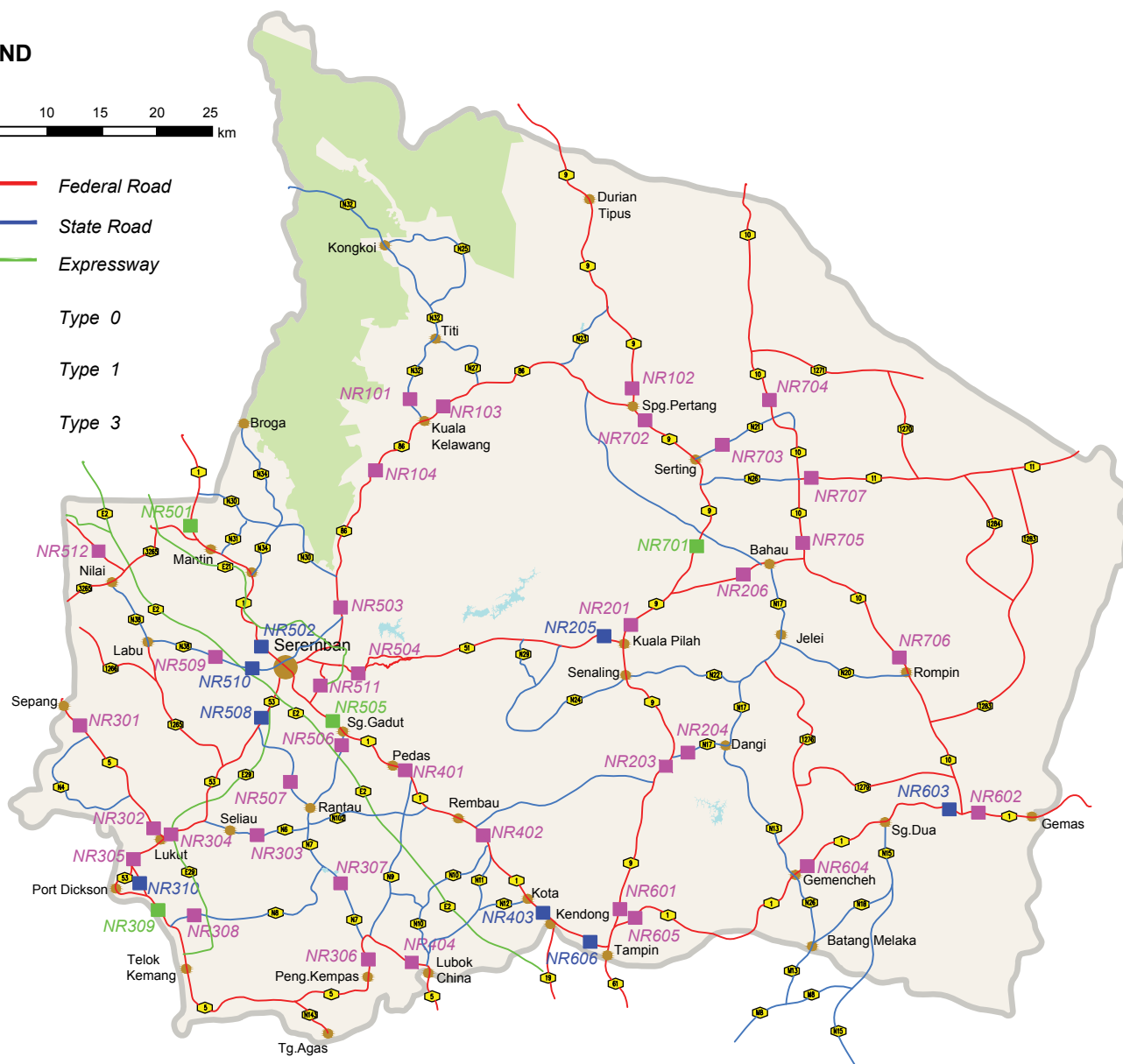
TRAFFIC CENSUS STATION MAP

STATE : **NEGERI SEMBILAN**

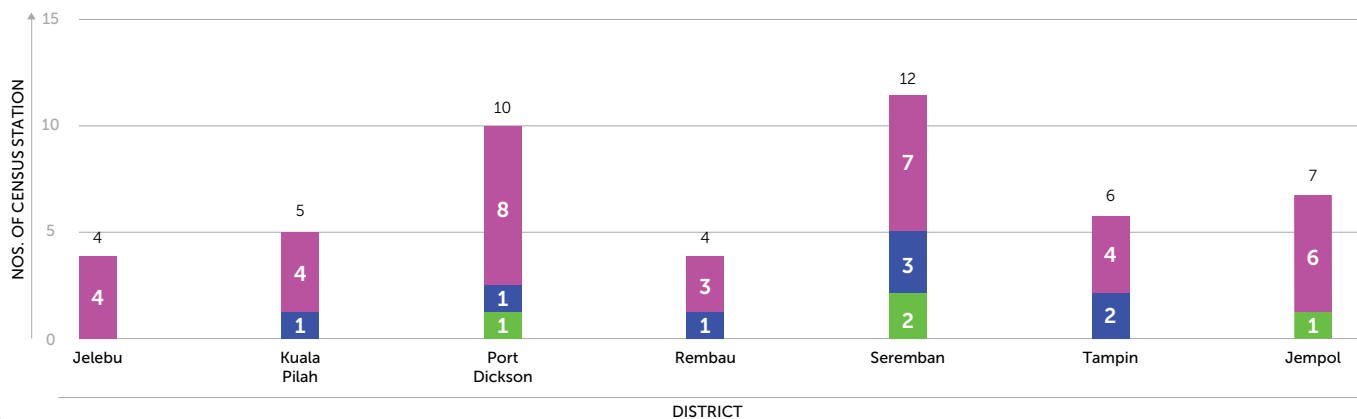
LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **NEGERI SEMBILAN**

District : JELEBU

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
NR101	3	N32	2.5	Kuala Klawang - Genting Peras	N : 2° 57' 08.0" E : 102° 03' 35.0"	Single	2
NR102	3	9	72.0	Kuala Pilah - Manchis (Simpang Pertang)	N : 2° 56' 49.0" E : 102° 15' 34.0"	Single	2
NR103	3	86	1.6	Kuala Klawang - Simpang Pertang (Peradong)	N : 2° 56' 48.0" E : 102° 05' 04.0"	Single	2
NR104	3	86	26.8	Seremban - Kuala Klawang	N : 2° 52' 45.0" E : 102° 01' 12.0"	Single	2

District : KUALA PILAH

NR201	3	9	42.7	Tampin - Kuala Pilah - Batu Kikir	N : 2° 45' 34.5" E : 102° 15' 19.2"	Single	2
NR203	3	9	19.3	Tampin - Kuala Pilah	N : 2° 38' 23.6" E : 102° 17' 30.3"	Single	2
NR204	3	N17	3.8	Dangi - Kepis - Jelai	N : 2° 38' 48.1" E : 102° 19' 47.5"	Single	2
NR205	1	51	33.0	Seremban - Kuala Pilah	N : 2° 44' 16.5" E : 102° 11' 59.9"	Single	2
NR206	3	13	2.1	Juasseh - Bahau	N : 2° 47' 11.0" E : 102° 18' 41.2"	Single	2

District : PORT DICKSON

NR301	3	5	26.3	Sepang - Port Dickson (Tanah Merah)	N : 2° 41' 24.2" E : 101° 45' 13.6"	Single	2
NR302	3	5	8.5	Sepang - Port Dickson (Lukut)	N : 2° 34' 26.5" E : 101° 49' 56.4"	Dual	4
NR303	3	N6	4.8	Rantau - Siliu	N : 2° 34' 42.9" E : 101° 55' 56.1"	Single	2
NR304	3	53	10.2	Seremban - Port Dickson (Lukut)	N : 2° 34' 54.8" E : 101° 50' 51.8"	Dual	4
NR305	3	5	4.0	Seremban - Port Dickson	N : 2° 33' 13.7" E : 101° 48' 23.5"	Dual	4
NR306	3	5	41.6	Port Dickson - Lubok Cina (Linggi)	N : 2° 28' 59.6" E : 102° 00' 43.5"	Single	2
NR307	3	N7	28.7	Seremban - Rantau - Linggi	N : 2° 30' 46.9" E : 101° 59' 56.3"	Single	2
NR308	3	N8	16.1	Jalan Rantau/Linggi - camp Si Rusa - Port Dickson	N : 2° 30' 08.2" E : 101° 51' 42.8"	Single	2
NR309	0	5	6.4	Port Dickson - Lubok Cina (Jalan Pantai)	N : 2° 29' 47.2" E : 101° 50' 22.2"	Single	2
NR310	1	5	30.6	Seremban - Port Dickson (Port Dickson Bypass)	N : 2° 31' 46.7" E : 101° 48' 11.6"	Dual	4

District : REMBAU

NR401	3	1	20.9	Seremban - Tampin	N : 2° 37' 09.1" E : 102° 03' 32.7"	Single	2
NR402	3	1	33.0	Seremban - Tampin	N : 2° 33' 27.9" E : 102° 07' 28.8"	Single	2
NR403	1	1	41.7	Seremban - Tampin	N : 2° 29' 47.3" E : 102° 10' 53.6"	Single	2
NR404	3	5	46.7	Linggi - Lubok Cina	N : 2° 28' 00.0" E : 102° 03' 07.5"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **NEGERI SEMBILAN**

District : SEREMBAN

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
NR501	0	1	20.0	Seremban - Kuala Lumpur (Old road)	N : 2° 51' 31.0" E : 101° 51' 49.0"	Single	2
NR502	1	1	2.5	Seremban - Kuala Lumpur (Old road)	N : 2° 44' 15.0" E : 101° 55' 48.9"	Single	2
NR503	3	86	9.7	Seremban - Kuala Klawang	N : 2° 44' 22.5" E : 101° 58' 49.9"	Single	2
NR504	3	51	9.7	Seremban - Kuala Pilah	N : 2° 43' 22.0" E : 101° 59' 33.0"	Dual	4
NR505	0	1	9.3	Seremban - Gemas (Sri Senawang Industrial Area)	N : 2° 40' 41.8" E : 101° 58' 46.8"	Dual	4
NR506	3	N5	9.7	Seremban - Sungai Gadut / Ulu Sawah	N : 2° 39' 34.2" E : 101° 59' 36.7"	Single	2
NR507	3	N7	11.3	Seremban - Kuala Sawah	N : 2° 39' 27.8" E : 101° 55' 18.5"	Single	2
NR508	1	53	11.4	Seremban - Port Dickson	N : 2° 39' 03.9" E : 101° 54' 27.3"	Single	2
NR509	3	362	1.3	Seremban - Labu	N : 2° 43' 18.0" E : 101° 54' 42.0"	Single	2
NR510	1	241	1.3	Sg. Ujong (in front of Shell)	N : 2° 43' 22.0" E : 101° 55' 27.1"	Single	2
NR511	3	97	9.0	Paroi - Senawang	N : 2° 43' 03.7" E : 101° 58' 46.5"	Dual	4
NR512	3	32	2.5	Nilai - KLIA	N : 2° 48' 44.0" E : 101° 47' 42.0"	Dual	4

District : TAMPIN

NR601	3	9	3.2	Tampin - Kuala Pilah	N : 2° 30' 21.8" E : 102° 14' 25.0"	Single	2
NR602	3	1	96.8	Seremban - Gemas (140m east of Rompin junction)	N : 2° 35' 13.4" E : 102° 34' 02.5"	Single	2
NR603	1	1	95.8	Seremban - Gemas (60m west of Rompin junction)	N : 2° 35' 16.4" E : 102° 33' 42.5"	Single	2
NR604	3	1	77.3	Seremban - Gemas	N : 2° 32' 37.9" E : 102° 24' 53.0"	Single	2
NR605	3	1	52.8	Seremban - Gemas	N : 2° 29' 39.2" E : 102° 14' 23.7"	Single	2
NR606	1	1	46.5	Seremban - Tampin	N : 2° 28' 53.3" E : 102° 12' 31.6"	Single	3

District : JEMPOL

NR701	0	9	55.5	Seremban - Batu Kikir - Bahau	N : 2° 50' 01.3" E : 102° 19' 08.2"	Single	2
NR702	3	9	70.8	Kuala Pilah - Manchis (Serting Ulu)	N : 2° 55' 30.4" E : 102° 16' 37.0"	Single	2
NR703	3	245	3.2	Serting Ulu - Ayer Hitam	N : 2° 53' 52.3" E : 102° 19' 01.1"	Single	2
NR704	3	10	16.9	Bahau - Ayer Hitam - Kemayan	N : 2° 56' 10.3" E : 102° 23' 18.8"	Single	2
NR705	3	10	4.8	Bahau - Kemayan	N : 2° 49' 15.0" E : 102° 24' 46.6"	Single	2
NR706	3	10	82.1	Bahau - Rompin	N : 2° 42' 33.0" E : 102° 30' 13.6"	Single	2
NR707	3	11	62.5	Lebuhraya Bahau - Keratong	N : 2° 53' 14.7" E : 102° 24' 45.4"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **NEGERI SEMBILAN**

MARCH 2014

District : JELEBU

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
NR101	-	11,541	2,016	2100-2200	58.6	4.8	2.1	1.0	0.6	32.9	100.0
NR102	-	3,887	314	1700-1800	48.3	11.5	9.0	5.5	0.5	25.2	100.0
NR103	-	12,316	1,161	2100-2200	50.3	12.7	5.1	1.7	0.5	29.7	100.0
NR104	-	5,607	664	2100-2200	57.1	11.9	6.3	5.3	0.6	18.7	100.0

District : KUALA PILAH

NR201	-	19,065	1,915	1600-1700	77.6	5.7	2.1	1.6	1.0	12.1	100.0
NR203	-	4,079	459	1800-1900	79.7	3.3	2.4	0.5	0.5	13.5	100.0
NR204	-	3,473	316	1700-1800	53.6	5.6	7.7	4.3	0.8	28.0	100.0
NR205	-	24,248	2,005	1700-1800	70.7	9.0	4.3	3.3	0.8	11.9	100.0
NR206	-	8,905	819	1600-1700	69.9	9.6	2.9	1.3	1.5	14.9	100.0

District : PORT DICKSON

NR301	-	26,822	2,969	2000-2100	72.6	6.0	5.4	3.6	0.4	12.0	100.0
NR302	-	50,087	5,443	1700-1800	79.7	4.7	4.2	3.2	0.5	7.7	100.0
NR303	-	6,275	543	0700-0800	42.8	10.8	6.4	3.1	0.8	36.1	100.0
NR304	-	71,586	7,075	1800-1900	81.2	4.7	4.3	3.2	0.5	6.0	100.0
NR305	-	96,332	9,611	1700-1800	82.1	4.1	3.5	3.3	0.4	6.5	100.0
NR306	-	4,526	410	1400-1500	46.3	9.7	5.5	1.9	1.2	35.4	100.0
NR307	-	4,948	509	1800-1900	48.2	10.5	4.2	2.4	0.9	33.6	100.0
NR308	-	8,176	977	0700-0800	59.8	11.4	2.3	0.8	0.5	25.2	100.0
NR309	30,321	26,552	2,142	0700-0800	64.5	10.2	2.2	0.3	0.5	22.3	100.0
NR310	-	16,349	1,468	0700-0800	67.6	7.7	3.2	3.6	0.4	17.5	100.0

District : REMBAU

NR401	-	14,154	1,607	1700-1800	62.4	8.8	6.5	3.0	0.9	18.4	100.0
NR402	-	7,749	691	1700-1800	55.4	8.5	8.8	3.9	1.5	21.9	100.0
NR403	-	12,225	1,092	1700-1800	66.6	7.8	8.5	3.2	0.9	12.9	100.0
NR404	-	2,874	288	1700-1800	44.2	10.4	11.1	6.4	1.9	26.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **NEGERI SEMBILAN**

MARCH 2014

District : SEREMBAN

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
NR501	12,753	11,482	985	0700-0800	57.7	10.0	8.6	5.1	0.7	18.0	100.0
NR502	-	34,353	2,770	0800-0900	71.9	3.7	4.6	0.4	0.4	19.1	100.0
NR503	-	13,064	1,088	1600-1700	73.2	5.8	2.9	0.4	0.4	17.4	100.0
NR504	-	21,353	1,914	0700-0800	67.4	6.2	6.7	4.7	0.9	14.0	100.0
NR505	52,816	48,219	3,974	1700-1800	67.5	6.8	7.6	3.8	0.5	13.8	100.0
NR506	-	22,512	2,230	0700-0800	56.4	8.1	7.3	1.8	0.5	25.9	100.0
NR507	-	16,922	1,481	1700-1800	57.6	7.7	8.8	2.7	0.6	22.6	100.0
NR508	-	16,525	1,425	1800-1900	64.3	4.2	5.1	1.5	0.7	24.1	100.0
NR509	-	26,045	2,182	0700-0800	63.4	9.0	7.2	2.7	0.4	17.4	100.0
NR510	-	60,209	4,233	1200-1300	81.0	2.3	2.2	0.3	1.3	13.0	100.0
NR511	-	19,145	2,029	0700-0800	64.2	7.6	6.6	2.4	0.3	19.0	100.0
NR512	-	27,655	2,432	1600-1700	72.0	8.0	4.4	1.6	0.4	13.6	100.0

District : TAMPIN

NR601	-	3,733	364	0700-0800	56.1	7.2	4.6	4.3	1.0	26.8	100.0
NR602	-	11,806	1,290	1400-1500	53.8	16.0	7.8	9.0	0.6	12.9	100.0
NR603	-	10,773	960	1700-1800	56.6	13.9	8.9	7.0	0.8	12.9	100.0
NR604	-	11,269	2,127	1900-2000	61.5	8.8	7.6	7.2	0.7	14.1	100.0
NR605	-	4,780	426	1700-1800	64.1	7.8	6.9	2.9	0.8	17.6	100.0
NR606	-	14,505	1,254	1700-1800	72.4	3.6	5.9	2.4	0.8	14.9	100.0

District : JEMPOL

NR701	18,987	16,261	1,453	1700-1800	64.9	11.0	4.7	5.1	0.5	13.9	100.0
NR702	-	4,800	485	2100-2200	49.4	19.1	6.8	7.8	0.3	16.6	100.0
NR703	-	6,113	715	1300-1400	37.6	14.3	12.6	18.2	0.8	16.7	100.0
NR704	-	8,251	835	1700-1800	54.2	13.5	7.2	6.0	0.4	18.7	100.0
NR705	-	30,280	2,470	2100-2200	55.2	14.8	5.3	3.8	0.3	20.6	100.0
NR706	-	6,986	583	1700-1800	53.4	14.6	5.7	8.3	0.4	17.6	100.0
NR707	-	10,659	969	2100-2200	53.0	15.8	7.9	10.8	0.6	12.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **NEGERI SEMBILAN**

SEPTEMBER 2014

District : JELEBU

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
NR101	-	13,559	2,084	2100-2200	56.1	6.0	3.0	0.9	0.3	33.8	100.0
NR102	-	3,718	326	2100-2200	45.3	12.3	10.7	6.1	0.4	25.2	100.0
NR103	-	8,123	1,380	2100-2200	51.6	9.3	4.1	1.6	0.3	33.2	100.0
NR104	-	5,381	604	2100-2200	64.1	10.6	7.5	3.0	0.5	14.3	100.0

District : KUALA PILAH

NR201	-	15,667	1,680	0700-0800	62.8	8.1	6.6	6.9	1.0	14.6	100.0
NR203	-	3,056	294	1400-1500	63.0	7.2	8.6	3.8	0.7	16.7	100.0
NR204	-	3,342	365	0700-0800	48.1	7.9	8.1	4.5	0.9	30.4	100.0
NR205	-	23,720	2,026	1700-1800	70.3	8.3	4.8	3.8	1.0	11.9	100.0
NR206	-	8,862	846	0700-0800	62.1	11.4	6.2	3.2	1.4	15.7	100.0

District : PORT DICKSON

NR301	-	27,840	3,497	0700-0800	74.4	6.3	5.6	4.1	0.4	9.2	100.0
NR302	-	42,871	4,583	1800-1900	72.8	6.1	6.3	4.3	0.6	10.0	100.0
NR303	-	4,157	455	0700-0800	47.3	7.3	11.6	2.8	0.7	30.4	100.0
NR304	-	52,638	5,486	0700-0800	72.8	7.6	4.5	4.1	0.6	10.4	100.0
NR305	-	79,412	8,802	0700-0800	81.8	5.0	3.6	2.0	0.3	7.3	100.0
NR306	-	3,169	287	0700-0800	49.3	6.8	8.0	1.1	0.9	34.0	100.0
NR307	-	3,381	417	0700-0800	52.8	8.0	10.3	1.9	0.7	26.4	100.0
NR308	-	5,765	960	0700-0800	67.6	7.3	3.6	0.3	0.6	20.5	100.0
NR309	33,183	28,937	2,302	1700-1800	70.9	6.5	2.1	0.4	0.4	19.6	100.0
NR310	-	22,968	1,919	0700-0800	64.9	9.3	2.2	2.2	0.4	21.0	100.0

District : REMBAU

NR401	-	17,853	1,999	2100-2200	64.3	5.8	6.0	2.0	0.5	21.3	100.0
NR402	-	10,914	1,185	2100-2200	62.2	7.7	9.6	4.2	0.7	15.6	100.0
NR403	-	10,693	903	1700-1800	63.8	11.2	8.2	4.4	1.1	11.3	100.0
NR404	-	2,613	242	2100-2200	54.0	7.0	12.9	5.7	0.5	20.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **NEGERI SEMBILAN**

SEPTEMBER 2014

District : SEREMBAN

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
NR501	13,265	12,138	995	1700-1800	57.4	11.2	9.0	4.4	0.6	17.4	100.0
NR502	-	38,410	3,095	1700-1800	72.5	5.2	4.9	0.3	0.3	16.8	100.0
NR503	-	16,443	2,056	0700-0800	61.2	11.4	7.9	3.0	0.3	16.1	100.0
NR504	-	20,521	1,893	0700-0800	67.1	8.7	7.0	4.6	0.9	11.8	100.0
NR505	53,515	47,784	4,242	0700-0800	68.4	7.1	7.8	2.7	0.5	13.6	100.0
NR506	-	20,782	1,992	0700-0800	55.8	10.0	7.6	2.1	0.5	24.0	100.0
NR507	-	18,682	1,745	1700-1800	56.1	10.3	9.2	2.9	0.6	20.9	100.0
NR508	-	15,114	1,278	0700-0800	62.9	5.2	5.6	1.9	0.7	23.8	100.0
NR509	-	28,055	2,236	1300-1400	67.3	8.6	7.2	3.0	0.3	13.7	100.0
NR510	-	55,249	3,945	1500-1600	81.4	2.8	2.3	0.3	1.2	11.9	100.0
NR511	-	18,454	2,161	0700-0800	66.3	8.4	4.8	2.2	0.2	18.0	100.0
NR512	-	25,612	2,176	1300-1400	73.5	8.3	3.2	0.5	0.2	14.3	100.0

District : TAMPIN

NR601	-	3,919	403	0700-0800	59.4	6.8	7.5	3.5	0.9	21.9	100.0
NR602	-	11,471	1,438	0700-0800	50.2	15.3	10.5	7.8	0.7	15.6	100.0
NR603	-	12,391	1,048	1700-1800	58.1	12.1	8.5	8.1	0.7	12.6	100.0
NR604	-	11,015	974	0700-0800	46.0	14.3	9.3	8.3	0.8	21.4	100.0
NR605	-	9,659	843	1700-1800	65.6	7.9	6.9	3.1	0.6	15.9	100.0
NR606	-	14,989	1,221	1700-1800	73.0	4.3	6.0	2.3	0.9	13.5	100.0

District : JEMPOL

NR701	22,269	18,316	1,664	1700-1800	58.0	14.1	7.2	6.8	0.5	13.3	100.0
NR702	-	7,923	663	2100-2200	48.3	14.0	8.7	11.1	0.6	17.3	100.0
NR703	-	4,961	512	2100-2200	35.6	16.5	13.2	15.9	1.1	17.8	100.0
NR704	-	7,089	664	2100-2200	55.5	14.7	6.6	5.7	0.7	16.9	100.0
NR705	-	31,667	2,507	2100-2200	51.8	15.0	6.9	4.7	0.3	21.2	100.0
NR706	-	7,946	817	1700-1800	49.5	13.5	7.9	11.0	0.7	17.3	100.0
NR707	-	16,321	1,815	1700-1800	48.9	17.6	8.8	9.7	0.6	14.4	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **NEGERI SEMBILAN**

AVERAGE 2014

District : JELEBU

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
NR101	12,550	2,050	57.3	5.4	2.5	0.9	0.4	33.3	F
NR102	3,803	320	46.8	11.9	9.9	5.8	0.4	25.2	A
NR103	10,220	1,271	50.9	11.0	4.6	1.6	0.4	31.4	C
NR104	5,494	634	60.6	11.2	6.9	4.2	0.6	16.5	A

District : KUALA PILAH

NR201	17,366	1,798	70.2	6.9	4.3	4.2	1.0	13.3	F
NR203	3,568	377	71.4	5.2	5.5	2.2	0.6	15.1	A
NR204	3,408	341	50.9	6.7	7.9	4.4	0.9	29.2	A
NR205	23,984	2,016	70.5	8.7	4.5	3.5	0.9	11.9	F
NR206	8,884	833	66.0	10.5	4.5	2.2	1.5	15.3	A

District : PORT DICKSON

NR301	27,331	3,233	73.5	6.1	5.5	3.8	0.4	10.6	F
NR302	46,479	5,013	76.3	5.4	5.3	3.7	0.5	8.8	F
NR303	5,216	499	45.0	9.0	9.0	2.9	0.7	33.3	A
NR304	62,112	6,281	77.0	6.1	4.4	3.7	0.5	8.2	F
NR305	87,872	9,207	81.9	4.5	3.6	2.7	0.4	6.9	F
NR306	3,848	349	47.8	8.2	6.8	1.5	1.1	34.7	A
NR307	4,165	463	50.5	9.2	7.3	2.2	0.8	30.0	A
NR308	6,971	969	63.7	9.4	2.9	0.5	0.5	22.9	A
NR309	27,745	2,222	67.7	8.3	2.2	0.4	0.5	20.9	E
NR310	19,659	1,694	66.3	8.5	2.7	2.9	0.4	19.2	A

District : REMBAU

NR401	16,004	1,803	63.3	7.3	6.3	2.5	0.7	19.9	F
NR402	9,332	938	58.8	8.1	9.2	4.1	1.1	18.7	A
NR403	11,459	997	65.2	9.5	8.4	3.8	1.0	12.1	B
NR404	2,744	265	49.1	8.7	12.0	6.1	1.2	23.0	A

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **NEGERI SEMBILAN**

AVERAGE 2014

District : SEREMBAN

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
NR501	11,810	990	57.6	10.6	8.8	4.7	0.6	17.7	B
NR502	36,382	2,933	72.2	4.4	4.7	0.4	0.3	18.0	F
NR503	14,754	1,572	67.2	8.6	5.4	1.7	0.4	16.8	E
NR504	20,937	1,904	67.3	7.5	6.8	4.7	0.9	12.9	A
NR505	48,002	4,108	68.0	6.9	7.7	3.3	0.5	13.7	D
NR506	21,647	2,111	56.1	9.0	7.5	1.9	0.5	24.9	F
NR507	17,802	1,613	56.9	9.0	9.0	2.8	0.6	21.8	F
NR508	15,820	1,351	63.6	4.7	5.4	1.7	0.7	24.0	C
NR509	27,050	2,209	65.4	8.8	7.2	2.9	0.3	15.5	F
NR510	57,729	4,089	81.2	2.5	2.2	0.3	1.3	12.5	C
NR511	18,800	2,095	65.3	8.0	5.7	2.3	0.2	18.5	F
NR512	26,634	2,304	72.7	8.1	3.8	1.1	0.3	14.0	A

District : TAMPIN

NR601	3,826	384	57.8	7.0	6.0	3.9	1.0	24.3	A
NR602	11,639	1,364	52.0	15.6	9.1	8.4	0.7	14.2	F
NR603	11,582	1,004	57.3	13.0	8.7	7.5	0.8	12.7	C
NR604	11,142	1,551	53.8	11.5	8.4	7.7	0.7	17.8	F
NR605	7,220	635	64.8	7.9	6.9	3.0	0.7	16.7	A
NR606	14,747	1,237	72.7	3.9	5.9	2.4	0.9	14.2	C

District : JEMPOL

NR701	17,289	1,559	61.4	12.6	6.0	6.0	0.5	13.6	F
NR702	6,362	574	48.8	16.6	7.7	9.4	0.4	17.0	A
NR703	5,537	614	36.6	15.4	12.9	17.0	0.9	17.2	B
NR704	7,670	750	54.8	14.1	6.9	5.8	0.6	17.8	A
NR705	30,974	2,489	53.5	14.9	6.1	4.3	0.3	20.9	F
NR706	7,466	700	51.4	14.1	6.8	9.7	0.6	17.5	A
NR707	13,490	1,392	50.9	16.7	8.4	10.2	0.6	13.2	F

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : NEGERI SEMBILAN

District : JELEBU

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
NR101	9,441	11,925	11,955	13,053	13,221	15,191	12,810	12,553	12,699	12,550	2.02	0.26
NR102	3,947	4,573	3,836	3,689	3,636	3,588	4,135	4,444	4,439	3,803	0.32	0.01
NR103	4,590	7,948	6,338	7,442	8,312	9,454	9,899	9,486	9,274	10,220	6.84	0.70
NR104	3,648	4,295	4,574	5,081	6,795	6,104	6,527	6,305	7,081	5,494	5.72	0.62

District : KUALA PILAH

NR201	13,206	13,502	13,311	15,078	15,159	18,275	16,325	13,054	18,015	17,366	2.92	0.44
NR203	4,145	4,473	4,927	4,626	3,847	3,177	5,212	4,738	3,616	3,568	-1.70	0.11
NR204	3,218	3,487	2,678	2,858	2,707	2,823	3,255	3,671	3,576	3,408	1.64	0.17
NR205	17,736	18,423	19,251	19,844	19,809	21,601	23,422	24,579	24,141	23,984	3.89	0.93
NR206	8,262	8,102	8,909	8,417	7,219	8,339	10,185	9,202	8,927	8,884	1.34	0.20

District : PORT DICKSON

NR301	17,076	20,348	28,788	28,144	28,268	35,671	17,207	27,411	24,273	27,331	2.41	0.09
NR302	27,663	35,071	48,624	38,945	51,177	46,261	36,334	39,319	41,120	46,479	2.67	0.19
NR303	4,662	5,228	4,643	4,724	5,802	5,165	5,574	5,667	5,448	5,216	1.62	0.36
NR304	41,562	47,909	58,328	68,327	67,092	65,580	46,201	54,394	59,864	62,112	2.20	0.15
NR305	78,375	86,761	98,122	106,925	102,377	106,143	72,372	96,685	74,129	87,872	-0.80	0.03
NR306	3,530	3,777	3,823	3,778	4,248	4,093	4,871	3,881	3,608	3,848	0.76	0.06
NR307	3,547	3,822	3,488	3,877	4,352	4,377	5,105	4,013	3,995	4,165	1.99	0.29
NR308	4,244	5,273	5,017	5,289	8,097	6,699	7,353	8,453	7,799	6,971	6.43	0.68
NR309	26,462	23,078	24,011	27,032	32,047	26,376	26,645	27,367	27,534	27,745	1.26	0.19
NR310	17,555	16,853	19,246	17,693	19,613	17,602	20,705	19,254	19,573	19,659	1.47	0.44

District : REMBAU

NR401	17,140	18,424	21,891	15,867	18,231	16,353	17,326	16,856	17,427	16,004	-1.30	0.18
NR402	11,701	11,755	12,051	11,614	11,621	11,678	12,620	11,775	9,910	9,332	-1.90	0.38
NR403	13,191	13,074	13,456	12,990	13,073	12,690	12,565	12,832	12,645	11,459	-1.10	0.61
NR404	2,730	2,612	2,382	2,631	2,848	2,694	2,913	2,674	2,673	2,744	0.63	0.12

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **NEGERI SEMBILAN**

District : SEREMBAN

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
NR501	13,410	14,844	15,418	14,329	12,530	12,052	11,964	11,397	10,671	11,810	-3.40	0.70
NR502	48,228	42,087	41,477	40,839	44,119	43,126	42,148	39,784	39,538	36,382	-1.90	0.59
NR503	8,320	6,647	7,009	24,952	9,793	10,778	14,080	11,882	13,933	14,754	6.88	0.28
NR504	18,195	12,955	14,104	18,121	17,048	17,423	18,817	19,923	20,620	20,937	3.87	0.56
NR505	43,096	39,714	38,284	38,197	33,697	35,708	38,378	57,639	50,484	48,002	2.89	0.27
NR506	13,634	17,299	16,542	16,955	16,879	20,621	22,052	22,302	23,784	21,647	5.38	0.83
NR507	11,587	12,215	13,261	14,115	15,974	17,087	17,825	18,194	17,083	17,802	5.19	0.86
NR508	12,687	12,811	13,023	13,264	6,218	14,728	15,310	16,349	15,911	15,820	3.60	0.15
NR509	14,045	14,315	17,259	18,692	14,456	21,511	22,881	25,373	25,246	27,050	7.76	0.84
NR510	60,078	61,845	64,193	65,787	67,554	58,814	58,337	60,592	60,615	57,729	-0.80	0.20
NR511	-	19,515	19,171	19,362	20,111	17,400	17,875	19,044	17,951	18,800	-0.80	0.23
NR512	-	13,856	15,724	18,200	18,414	21,625	25,022	25,048	22,912	26,634	7.81	0.89

District : TAMPIN

NR601	3,840	3,782	3,911	4,218	4,504	4,040	4,096	4,177	3,964	3,826	0.26	0.02
NR602	4,997	8,477	9,234	10,161	10,632	10,726	10,240	11,614	11,234	11,639	6.52	0.61
NR603	8,401	9,625	9,635	10,331	10,723	10,231	10,855	11,816	11,791	11,582	3.29	0.86
NR604	5,347	9,206	10,171	10,580	11,050	11,312	10,837	11,007	10,976	11,142	5.05	0.45
NR605	8,876	8,590	9,089	9,349	9,359	9,721	10,055	9,894	9,477	7,220	-0.30	0.01
NR606	12,507	14,052	13,689	14,890	14,431	13,993	15,056	14,965	14,986	14,747	1.44	0.57

District : JEMPOL

NR701	15,846	14,803	14,349	15,388	15,845	16,407	16,020	19,559	17,685	17,289	2.26	0.57
NR702	4,885	4,326	5,039	5,645	5,865	5,739	6,242	5,391	5,587	6,362	2.90	0.56
NR703	3,229	4,635	2,719	3,203	5,933	6,629	4,667	4,322	4,802	5,537	5.25	0.30
NR704	8,160	10,333	9,114	7,098	7,103	7,304	8,321	8,072	7,610	7,670	-1.70	0.19
NR705	20,832	24,966	25,634	24,334	26,119	21,951	21,282	26,948	31,858	30,974	3.00	0.39
NR706	6,566	8,537	9,132	10,743	9,510	7,911	8,456	8,160	7,920	7,466	-0.50	0.01
NR707	18,974	15,339	11,943	9,087	9,094	12,438	12,944	10,892	10,616	13,490	-2.90	0.15

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

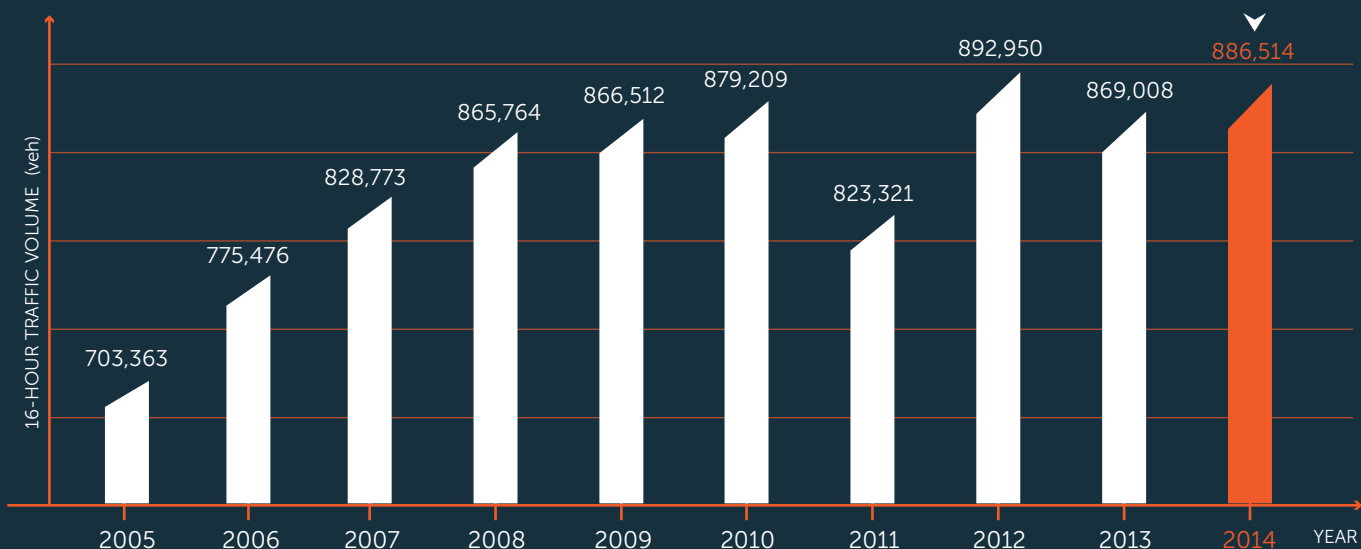


Figure 3.7-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Negeri Sembilan



There are 48 census stations in Negeri Sembilan. The 16-hour traffic volume documented in 2014 shows increasing of 17,506 vehicles compared to 2013 which equivalent to 2.01%. Overall, traffic volume increase rapidly from 2005 to 2010, and then dipped 6.36% in 2011. However, the traffic volumes increase and decrease alternately.

**2.01%
INCREASE
FROM 2013**

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

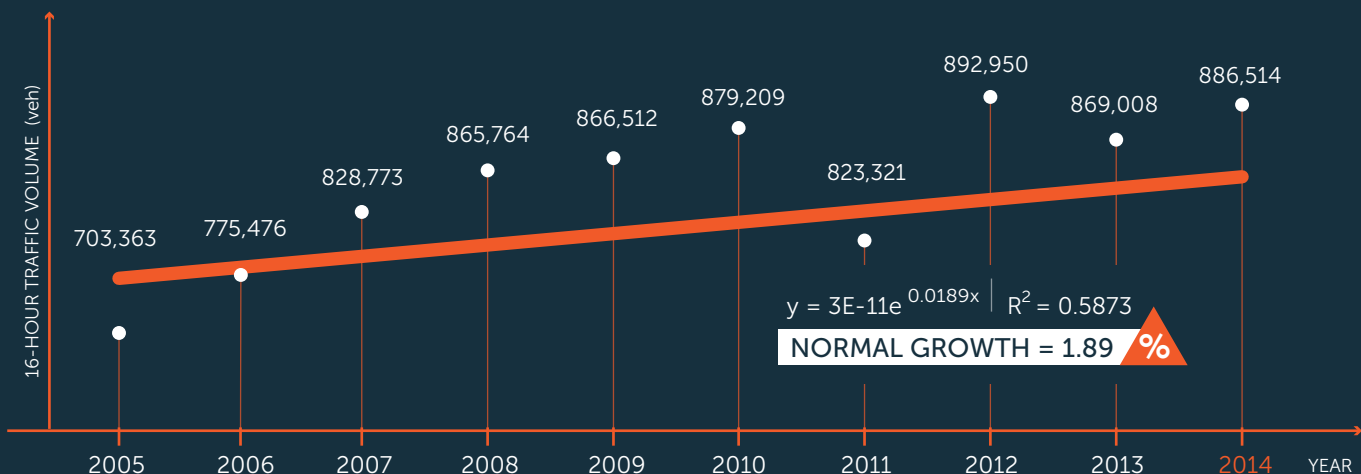


Figure 3.7-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Negeri Sembilan

Traffic growth rate recorded for the state of Negeri Sembilan is 1.89% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Negeri Sembilan.

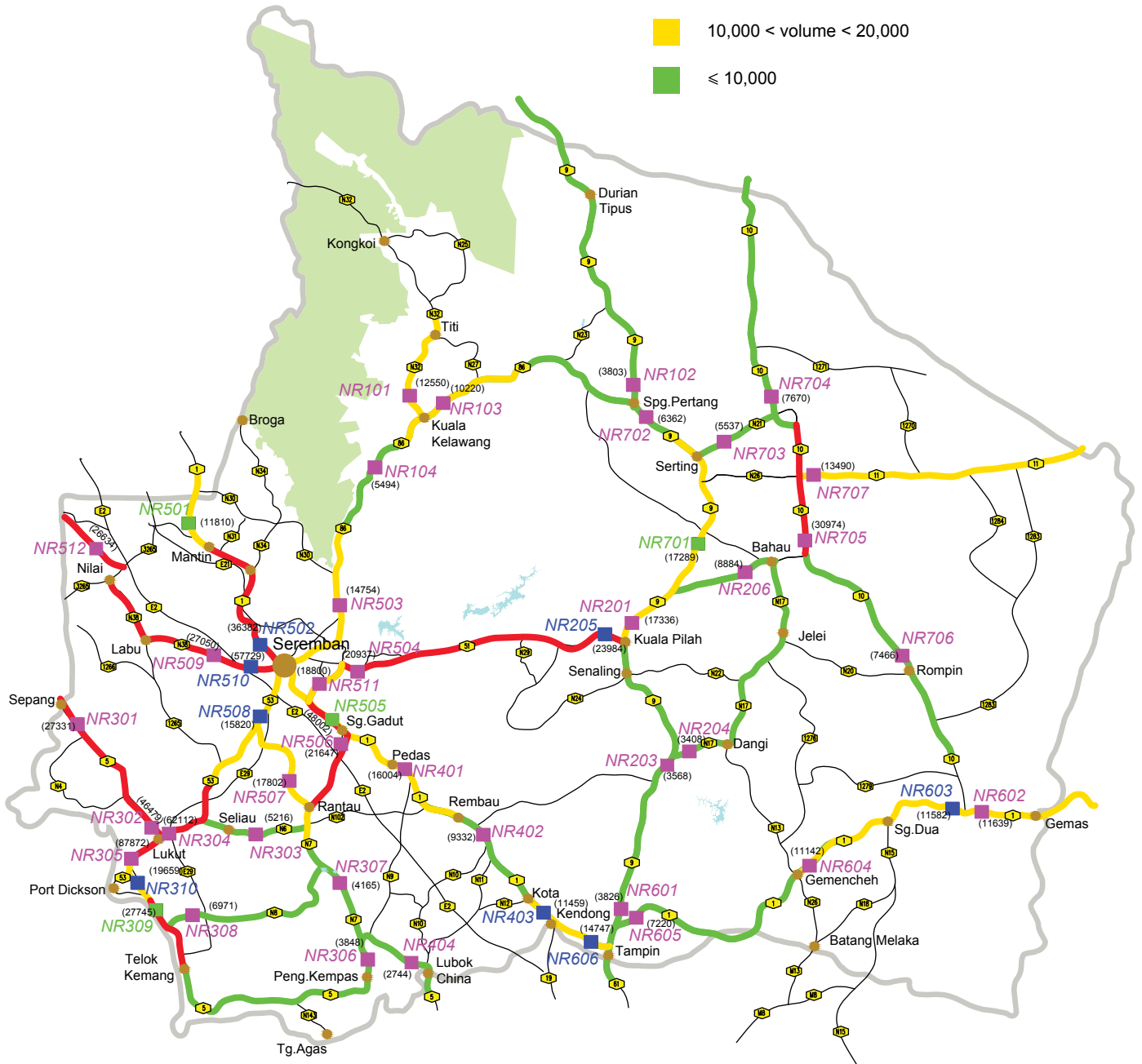
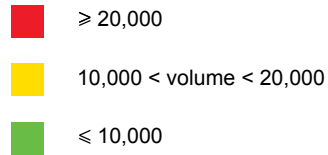
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **NEGERI SEMBILAN**

LEGEND



Traffic Volume Scale





Bangunan Stadthuys Bandar Hilir

MELAKA

BANDARAYA BERSEJARAH

32 Census Stations

Road Length : **3,310.27 km***

Land Area : **1,664 km²****

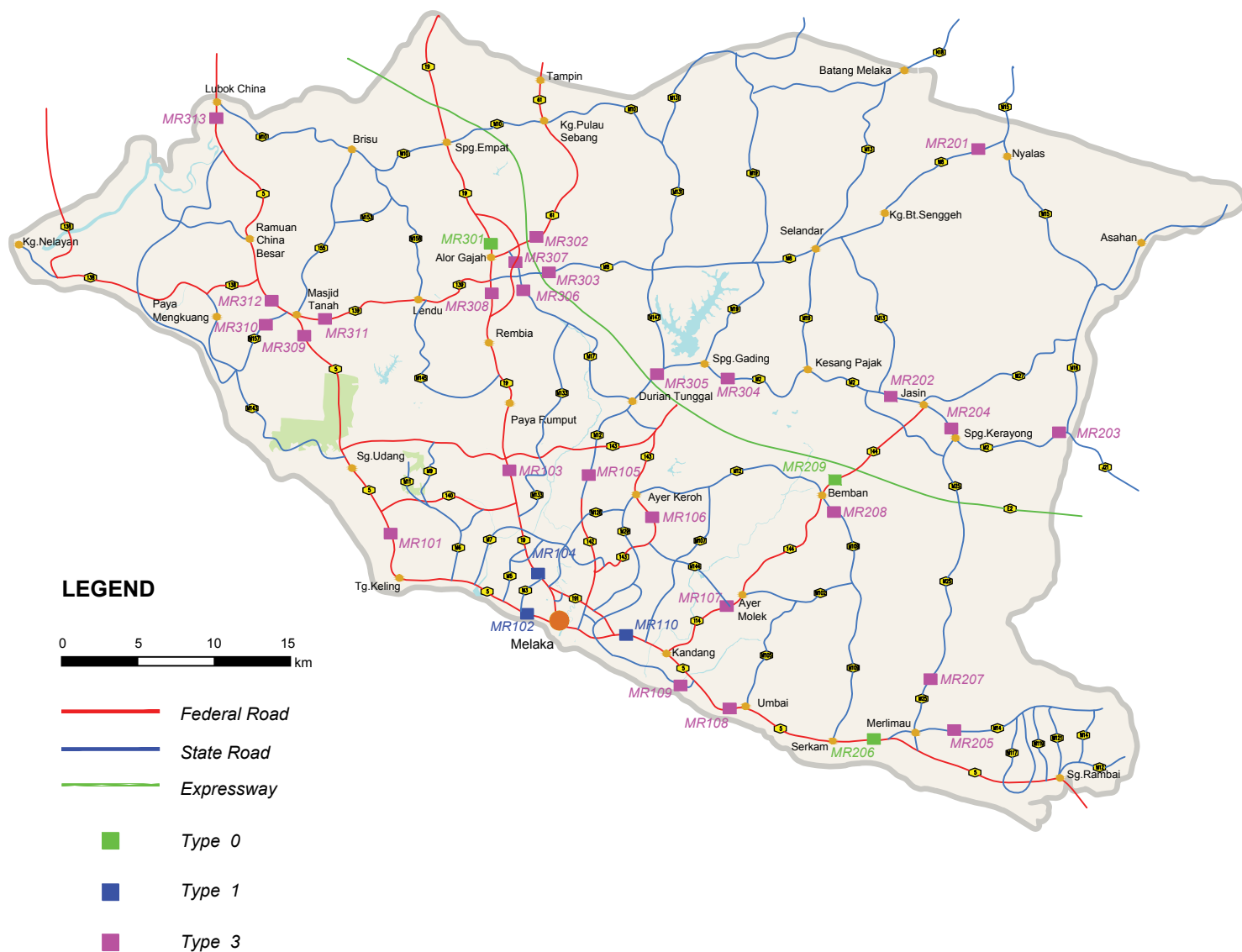
Population : **788,706 people****

*Source : Road Facilities Maintenance Division, JKR Malaysia

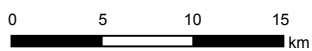
**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **MELAKA**

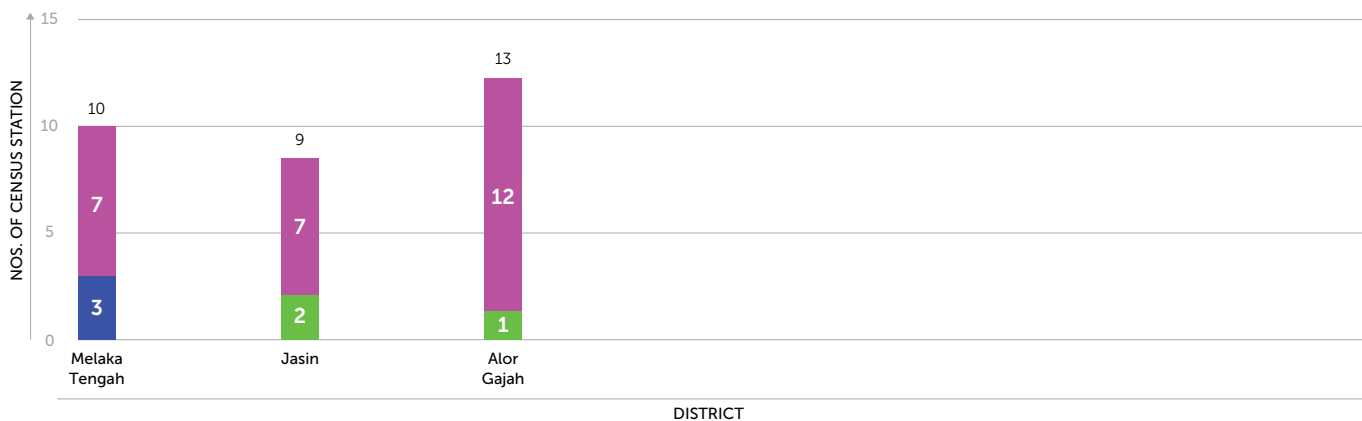


LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **MELAKA**

District : MELAKA TENGAH

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
MR101	3	5	14.2	Jalan Melaka - Masjid Tanah	N : 2° 14' 19.9" E : 102° 09' 37.1"	Single	2
MR102	1	5	5.2	Jalan Melaka - Sungai Udang	N : 2° 12' 92.6" E : 102° 12' 36.0"	Single	2
MR103	3	19	11.3	Lebuah AMJ (Melaka - Alor Gajah)	N : 2° 17' 07.0" E : 102° 12' 51.5"	Dual	4
MR104	1	19	5.0	Lebuah AMJ (Melaka - Kendong)	N : 2° 12' 49.5" E : 102° 14' 49.1"	Dual	4
MR105	3	M2	9.7	Melaka - Durian Tunggal	N : 2° 15' 34.3" E : 102° 15' 12.2"	Dual	4
MR106	3	M31	14.0	Jalan Bukit Katil	N : 2° 11' 67.1" E : 102° 16' 13.9"	Dual	4
MR107	3	M27	9.7	Melaka - Kampung Kandang - Bemban	N : 2° 13' 11.4" E : 102° 19' 00.2"	Single	2
MR108	3	5	12.1	Jalan Melaka - Muar	N : 2° 09' 40.4" E : 102° 20' 03.9"	Single	2
MR109	3	5	4.0	Jalan Melaka-Muar (Bandar Hilir - Kg. Kendong road)	N : 2° 10' 41.6" E : 102° 18' 00.8"	Single	2
MR110	1	5	3.2	Jalan Melaka - Muar	N : 2° 12' 49.5" E : 102° 17' 29.2"	Dual	6

District : JASIN

MR201	3	M8	38.6	Selandar - Nyalas	N : 2° 24' 00.1" E : 102° 24' 20.4"	Single	2
MR202	3	M2	35.4	Durian Tunggal - Jasin	N : 2° 18' 41.9" E : 102° 25' 04.9"	Single	2
MR203	3	M2	38.6	Jasin - Kampong Chohong	N : 2° 17' 43.1" E : 102° 30' 07.9"	Single	2
MR204	3	M2	32.2	Jasin - Simpang Kerayong	N : 2° 17' 42.1" E : 102° 30' 07.9"	Single	2
MR205	3	M14	24.2	Merlimau - Batu Gajah	N : 2° 08' 51.7" E : 102° 26' 40.4"	Single	2
MR206	0	5	22.9	Jalan Melaka - Muar	N : 2° 08' 45.6" E : 102° 25' 08.2"	Single	2
MR207	3	M25	24.2	Merlimau - Jasin	N : 2° 09' 48.7" E : 102° 25' 47.7"	Single	2
MR208	3	M109	32.2	Serkam - Bemban	N : 2° 08' 58.2" E : 102° 23' 15.6"	Single	2
MR209	0	144	2.1	Jasin - Bemban	N : 2° 16' 02.6" E : 102° 22' 42.4"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **MELAKA**

District : **ALOR GAJAH**

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
MR301	0	19	25.0	Lebuah AMJ (Alor Gajah - Kendong)	N : 2° 23' 28.0" E : 102° 12' 21.6"	Single	2
MR302	3	61	25.8	Jalan Alor Gajah - Tampin	N : 2° 23' 20.6" E : 102° 13' 09.7"	Single	2
MR303	3	M8	34.3	Alor Gajah - Machap	N : 2° 22' 22.5" E : 102° 13' 34.9"	Single	2
MR304	3	M2	20.9	Durian Tunggal - Simpang Gading - Kesang Pajak	N : 2° 19' 31.4" E : 102° 20' 09.9"	Single	2
MR305	3	M2	17.7	Durian Tunggal - Simpang Gading	N : 2° 19' 05.3" E : 102° 21' 38.3 "	Single	2
MR306	3	M17	25.8	Durian Tunggal - Alor Gajah	N : 2° 21' 42.4" E : 102° 13' 41.3"	Single	2
MR307	3	M17	27.4	Durian Tunggal - Alor Gajah	N : 2° 22' 39.7" E : 102° 13' 16.0"	Single	2
MR308	3	19	22.5	Lebuah AMJ (Melaka - Alor Gajah)	N : 2° 21' 56.4" E : 102° 12' 28.0"	Dual	4
MR309	3	5	27.4	Melaka - Masjid Tanah	N : 2° 20' 22.7" E : 102° 07' 00.4"	Single	2
MR310	3	M157	30.6	Masjid Tanah - Pengkalan Balak	N : 2° 20' 55.0" E : 102° 05' 40.7"	Single	2
MR311	3	139	33.8	Jalan Masjid Tanah - Lendu - Alor Gajah	N : 2° 21' 07.1" E : 102° 07' 21.2"	Single	2
MR312	3	5	30.6	Jalan Melaka - Masjid Tanah - Lubok China	N : 2° 21' 45.2" E : 102° 05' 46.3"	Single	2
MR313	3	5	43.5	Jalan Melaka - Masjid Tanah - Lubok China	N : 2° 27' 12.5" E : 102° 04' 11.9"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **MELAKA**

MARCH 2014

District : MELAKA TENGAH

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
MR101	-	14,759	1,414	1800-1900	61.6	8.0	1.2	0.1	0.7	28.4	100.0
MR102	-	33,020	2,787	1800-1900	68.0	5.1	2.3	0.5	0.4	23.6	100.0
MR103	-	50,032	5,959	0700-0800	63.8	10.0	6.5	1.9	0.4	17.3	100.0
MR104	-	96,241	7,614	1800-1900	75.6	5.2	2.6	0.5	0.5	15.6	100.0
MR105	-	39,568	4,158	0700-0800	63.2	11.0	5.7	0.8	1.4	18.0	100.0
MR106	-	47,834	8,186	0700-0800	66.9	11.5	2.0	0.1	0.2	19.3	100.0
MR107	-	12,143	1,545	1800-1900	63.8	10.1	4.4	0.3	0.5	20.8	100.0
MR108	-	23,098	3,103	0700-0800	57.2	8.1	3.2	0.2	0.4	30.9	100.0
MR109	-	11,230	1,179	2000-2100	61.1	10.3	2.2	0.1	0.5	25.8	100.0
MR110	-	83,333	7,492	1800-1900	78.9	2.7	2.8	0.6	0.6	14.5	100.0

District : JASIN

MR201	-	3,251	353	0700-0800	45.1	4.0	14.1	7.4	0.3	29.1	100.0
MR202	-	5,783	690	0700-0800	57.3	4.8	3.3	0.6	1.0	33.0	100.0
MR203	-	8,437	768	0700-0800	57.2	5.9	8.6	2.3	0.7	25.3	100.0
MR204	-	10,485	1,137	0700-0800	59.5	3.2	5.9	1.0	0.8	29.6	100.0
MR205	-	3,922	491	0700-0800	50.4	7.9	4.5	0.5	0.8	36.0	100.0
MR206	20,224	17,086	1,516	1800-1900	57.9	4.4	3.1	0.5	0.8	33.3	100.0
MR207	-	10,128	1,174	1800-1900	54.7	6.9	5.1	2.2	0.4	30.6	100.0
MR208	-	6,302	710	1700-1800	51.7	7.5	4.3	0.8	0.3	35.4	100.0
MR209	22,875	20,844	1,881	0700-0800	64.9	6.1	5.4	0.7	0.4	22.4	100.0

District : ALOR GAJAH

MR301	17,420	15,724	1,360	1700-1800	55.8	3.2	4.8	0.8	0.9	34.5	100.0
MR302	-	14,812	1,708	0700-0800	57.1	10.0	5.2	0.9	0.8	25.9	100.0
MR303	-	17,166	1,861	0700-0800	54.0	9.2	4.9	1.9	0.4	29.6	100.0
MR304	-	2,073	208	1700-1800	60.4	12.3	4.1	1.3	0.3	21.5	100.0
MR305	-	9,290	1,181	0700-0800	49.2	10.0	11.6	3.9	0.4	24.8	100.0
MR306	-	11,703	1,456	0700-0800	55.5	8.9	8.8	3.1	0.8	23.0	100.0
MR307	-	14,811	1,763	0700-0800	51.9	8.3	6.1	1.4	0.7	31.6	100.0
MR308	-	14,922	1,181	1700-1800	53.9	10.1	5.0	0.9	1.0	29.1	100.0
MR309	-	20,048	2,119	0700-0800	61.2	7.1	3.8	0.6	0.8	26.5	100.0
MR310	-	15,664	1,699	0700-0800	58.7	6.8	2.7	0.3	0.3	31.1	100.0
MR311	-	13,965	1,440	0700-0800	59.9	6.3	4.1	0.7	0.8	28.3	100.0
MR312	-	8,177	1,257	0700-0800	57.9	6.5	3.7	0.5	0.7	30.7	100.0
MR313	-	9,134	1,098	0700-0800	50.9	5.6	4.2	0.9	0.3	38.1	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **MELAKA**

SEPTEMBER 2014

District : MELAKA TENGAH

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
MR101	-	14,201	1,623	1800-1900	57.0	9.8	2.8	0.4	0.8	29.2	100.0
MR102	-	39,970	3,401	1700-1800	70.5	3.3	2.1	0.4	0.4	23.2	100.0
MR103	-	52,761	7,000	0700-0800	64.9	11.1	6.5	1.9	0.4	15.3	100.0
MR104	-	99,931	9,760	1800-1900	75.0	5.1	2.7	0.4	0.4	16.4	100.0
MR105	-	41,436	4,145	1800-1900	63.2	12.1	4.7	0.7	1.5	17.8	100.0
MR106	-	47,487	6,645	0700-0800	65.1	11.7	2.4	0.1	0.2	20.6	100.0
MR107	-	14,128	1,476	1800-1900	64.0	11.7	3.4	0.3	0.4	20.2	100.0
MR108	-	25,162	2,478	1700-1800	62.1	10.3	2.5	0.1	0.4	24.6	100.0
MR109	-	11,403	1,435	1900-2000	66.8	8.6	0.8	0.0	0.4	23.3	100.0
MR110	-	56,240	5,863	0700-0800	78.0	2.8	2.5	0.6	0.6	15.5	100.0

District : JASIN

MR201	-	3,233	428	0700-0800	39.3	6.6	13.1	8.9	0.6	31.5	100.0
MR202	-	5,619	642	0700-0800	61.2	5.6	3.6	0.5	0.6	28.5	100.0
MR203	-	7,207	621	0700-0800	55.2	6.9	9.9	2.3	0.6	25.0	100.0
MR204	-	10,189	990	0700-0800	57.9	3.9	4.6	0.7	0.6	32.2	100.0
MR205	-	7,032	783	0700-0800	52.0	4.2	2.6	0.3	0.4	40.5	100.0
MR206	19,503	17,137	1,348	0700-0800	57.4	4.9	2.5	0.5	0.7	33.9	100.0
MR207	-	15,029	1,580	0700-0800	60.6	2.9	3.9	0.9	0.5	31.2	100.0
MR208	-	8,470	998	0700-0800	54.9	4.0	4.0	0.5	0.3	36.3	100.0
MR209	23,274	21,166	2,008	0700-0800	65.5	6.8	5.2	1.0	0.4	21.2	100.0

District : ALOR GAJAH

MR301	17,219	15,607	1,437	1800-1900	51.7	3.3	4.5	0.7	0.8	39.0	100.0
MR302	-	14,787	1,193	1400-1500	59.2	11.7	5.1	1.4	0.7	22.1	100.0
MR303	-	20,211	1,905	0700-0800	55.8	8.5	3.5	1.7	0.4	30.1	100.0
MR304	-	3,008	410	0700-0800	48.5	8.9	11.7	3.4	0.0	27.5	100.0
MR305	-	9,141	1,012	0700-0800	46.2	12.0	11.0	3.5	0.5	26.7	100.0
MR306	-	11,876	1,927	0700-0800	54.0	9.7	7.9	2.6	0.6	25.2	100.0
MR307	-	15,054	1,800	0700-0800	53.7	8.2	5.4	1.7	0.6	30.2	100.0
MR308	-	13,357	1,825	1400-1500	53.4	7.8	1.5	0.2	0.9	36.1	100.0
MR309	-	17,923	2,008	1800-1900	61.7	6.7	4.6	0.7	0.6	25.7	100.0
MR310	-	13,977	1,547	0700-0800	58.7	4.4	3.5	0.8	0.5	32.1	100.0
MR311	-	13,079	1,176	0700-0800	62.7	4.6	5.0	1.1	0.7	25.9	100.0
MR312	-	13,557	1,567	0700-0800	62.5	4.5	4.5	1.2	0.8	26.5	100.0
MR313	-	8,891	930	0700-0800	52.4	4.3	4.3	1.7	0.3	37.0	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **MELAKA**

AVERAGE 2014

District : MELAKA TENGAH

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
MR101	14,480	1,519	59.3	8.9	2.0	0.3	0.7	28.8	D
MR102	36,495	3,094	69.3	4.2	2.2	0.5	0.4	23.4	F
MR103	51,397	6,480	64.3	10.6	6.5	1.9	0.4	16.3	F
MR104	98,086	8,687	75.3	5.2	2.6	0.4	0.5	16.0	F
MR105	40,502	4,152	63.2	11.5	5.2	0.7	1.4	17.9	D
MR106	47,661	7,416	66.0	11.6	2.2	0.1	0.2	19.9	F
MR107	13,136	1,511	63.9	10.9	3.9	0.3	0.4	20.5	D
MR108	24,130	2,791	59.7	9.2	2.9	0.2	0.4	27.7	F
MR109	11,317	1,307	64.0	9.5	1.5	0.1	0.5	24.6	B
MR110	69,786	6,677	78.4	2.7	2.6	0.6	0.6	15.0	B

District : JASIN

MR201	3,242	391	42.2	5.3	13.6	8.1	0.4	30.3	A
MR202	5,701	666	59.2	5.2	3.4	0.6	0.8	30.8	A
MR203	7,822	695	56.2	6.4	9.3	2.3	0.6	25.1	A
MR204	10,337	1,064	58.7	3.6	5.2	0.8	0.7	30.9	A
MR205	5,477	637	51.2	6.0	3.6	0.4	0.6	38.3	A
MR206	17,112	1,432	57.7	4.7	2.8	0.5	0.8	33.6	C
MR207	12,579	1,377	57.6	4.9	4.5	1.6	0.5	30.9	C
MR208	7,386	854	53.3	5.7	4.1	0.7	0.3	35.9	A
MR209	21,005	1,945	65.2	6.5	5.3	0.8	0.4	21.8	F

District : ALOR GAJAH

MR301	15,665	1,399	53.7	3.3	4.7	0.7	0.9	36.7	C
MR302	14,800	1,451	58.2	10.8	5.1	1.1	0.7	24.0	D
MR303	18,689	1,883	54.9	8.8	4.2	1.8	0.4	29.9	F
MR304	2,541	309	54.5	10.6	7.9	2.3	0.2	24.5	A
MR305	9,216	1,097	47.7	11.0	11.3	3.7	0.5	25.7	C
MR306	11,790	1,692	54.8	9.3	8.3	2.8	0.7	24.1	F
MR307	14,933	1,782	52.8	8.3	5.8	1.5	0.7	30.9	F
MR308	14,140	1,503	53.7	9.0	3.2	0.6	1.0	32.6	D
MR309	18,986	2,064	61.5	6.9	4.2	0.6	0.7	26.1	F
MR310	14,821	1,623	58.7	5.6	3.1	0.5	0.4	31.6	D
MR311	13,522	1,308	61.3	5.4	4.5	0.9	0.7	27.1	C
MR312	10,867	1,412	60.2	5.5	4.1	0.9	0.7	28.6	C
MR313	9,013	1,014	51.7	5.0	4.3	1.3	0.3	37.5	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **MELAKA**

District : MELAKA TENGAH

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
MR101	14,842	11,374	13,747	12,959	13,324	13,263	14,820	15,908	16,436	14,480	2.11	0.35
MR102	25,146	21,793	21,041	21,348	25,440	25,536	25,430	22,884	30,915	36,495	4.09	0.51
MR103	23,784	30,450	33,637	36,035	36,079	39,634	37,335	44,607	43,876	51,397	6.73	0.89
MR104	60,225	61,516	70,873	79,525	83,893	93,299	96,793	96,894	92,695	98,086	5.77	0.86
MR105	25,237	27,695	31,197	27,531	25,053	31,681	35,593	34,499	36,848	40,502	4.71	0.74
MR106	29,737	35,353	37,557	36,517	36,020	35,818	39,464	41,988	42,982	47,661	3.88	0.82
MR107	7,712	8,788	9,083	9,340	9,130	7,579	10,199	11,133	10,888	13,136	4.48	0.64
MR108	24,650	29,826	22,917	18,224	18,925	19,298	19,723	21,897	19,909	24,130	-1.80	0.13
MR109	10,701	10,701	9,754	8,880	8,882	10,415	11,968	11,174	10,111	11,317	1.12	0.12
MR110	68,864	66,757	68,913	82,706	87,224	81,156	45,710	84,604	87,011	69,786	0.70	0.01

District : JASIN

MR201	3,281	3,371	3,585	7,681	3,549	3,260	3,081	2,748	3,091	3,242	-3.00	0.10
MR202	4,584	4,709	5,067	5,499	5,293	3,933	5,187	4,946	5,268	5,701	1.31	0.14
MR203	7,189	7,638	7,992	8,304	8,047	7,672	8,088	6,760	8,257	7,822	0.21	0.01
MR204	10,063	11,855	12,859	9,206	10,637	10,139	9,958	8,723	9,836	10,337	-1.70	0.21
MR205	5,367	5,023	4,360	3,784	5,674	3,819	4,922	4,818	4,833	5,477	0.49	0.01
MR206	23,019	24,404	19,090	14,057	15,501	15,679	16,426	17,044	16,779	17,112	-3.30	0.32
MR207	7,848	10,573	12,057	11,066	15,120	12,735	13,703	15,204	10,377	12,579	3.48	0.28
MR208	4,226	4,297	3,502	3,822	5,385	4,574	5,511	4,691	6,539	7,386	6.28	0.66
MR209	-	14,953	15,208	15,928	16,672	16,113	18,495	20,079	20,578	21,005	4.72	0.93

District : ALOR GAJAH

MR301	16,414	9,971	10,761	11,057	9,986	11,472	11,465	11,170	15,715	15,665	1.94	0.09
MR302	10,581	12,276	11,395	12,779	13,613	13,817	12,885	12,949	14,712	14,800	3.01	0.74
MR303	8,448	9,828	11,586	6,622	11,743	10,734	13,780	13,566	18,595	18,689	8.79	0.67
MR304	3,017	1,836	2,060	1,894	1,939	2,421	1,981	2,060	2,158	2,541	-0.04	0.00
MR305	7,820	9,158	9,463	7,691	8,339	8,544	8,123	8,956	9,394	9,216	0.95	0.14
MR306	9,226	8,791	9,773	9,331	9,620	10,456	10,387	11,237	12,433	11,790	3.48	0.86
MR307	13,071	11,247	12,160	12,085	12,514	13,184	13,117	13,487	14,868	14,933	2.40	0.67
MR308	24,118	16,038	16,299	15,980	14,565	14,284	14,184	16,009	14,974	14,140	-3.50	0.45
MR309	18,226	17,625	17,321	17,782	18,420	19,111	18,400	20,074	19,802	18,986	1.25	0.60
MR310	9,684	9,902	10,269	9,436	12,243	13,868	13,687	14,472	14,115	14,821	5.62	0.84
MR311	8,610	8,209	8,716	9,204	9,975	11,708	11,268	12,676	11,183	13,522	5.37	0.87
MR312	14,722	15,586	15,281	16,569	15,481	12,140	14,922	16,322	16,602	10,867	-1.50	0.11
MR313	6,068	7,255	8,730	8,179	7,709	7,858	8,084	8,480	9,097	9,013	3.02	0.58

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

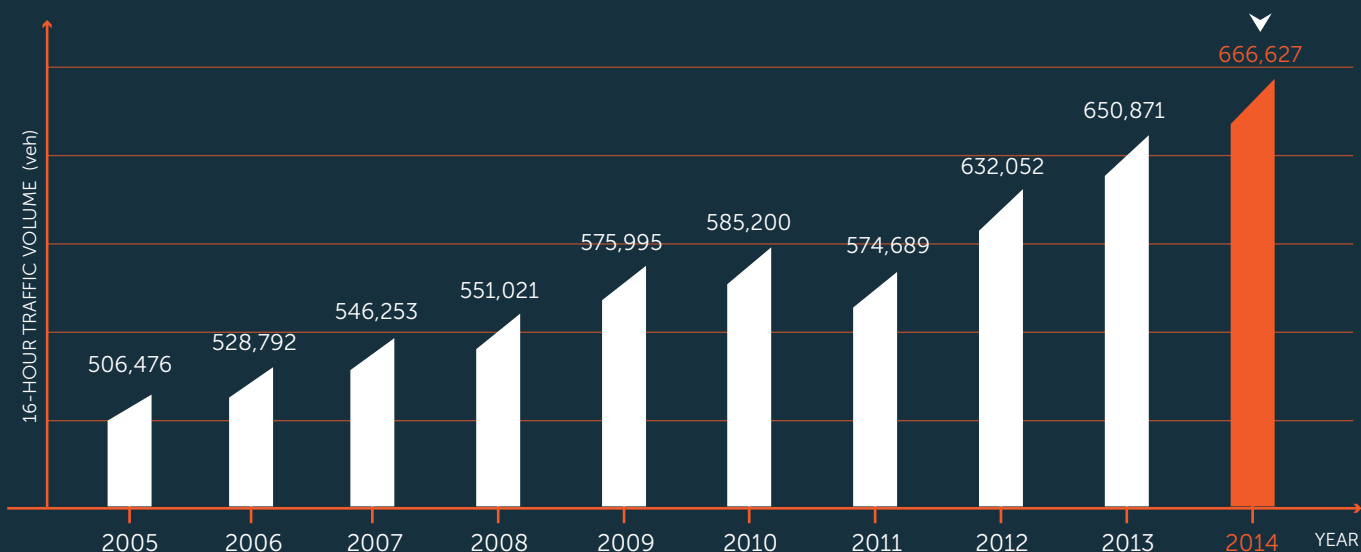


Figure 3.8-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Melaka



There are 32 census stations in Melaka. The 16-hour traffic volume documented in 2014 shows an increasing of 2.42% compared to year 2013. Overall, pattern shows gradual and steady increase from 2005, except for a slight drop of 1.8% in 2011. Growth returned to a sharp positive the following year until 2014.

2.42%
INCREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

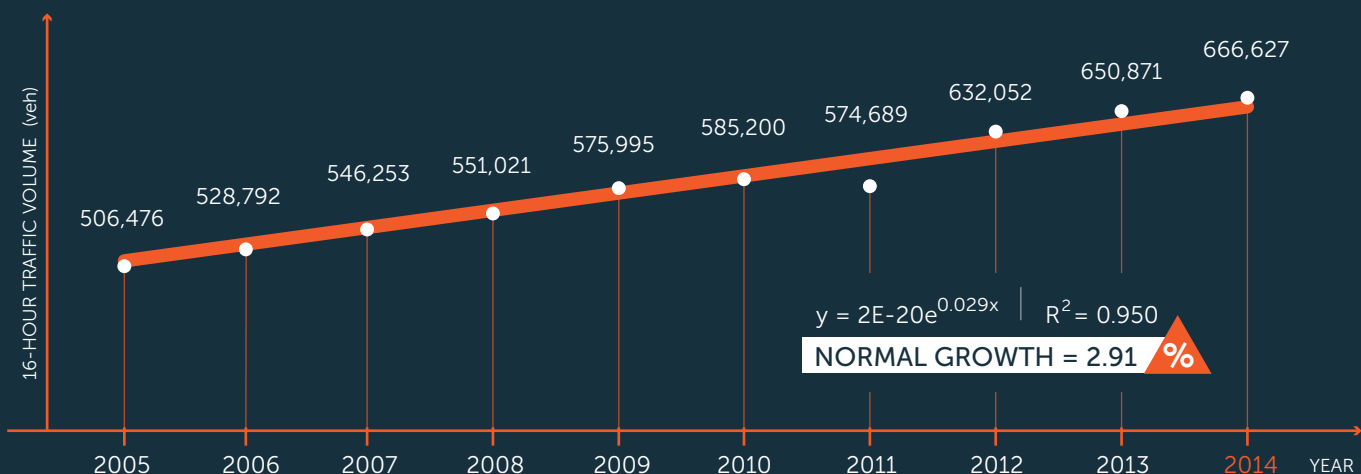
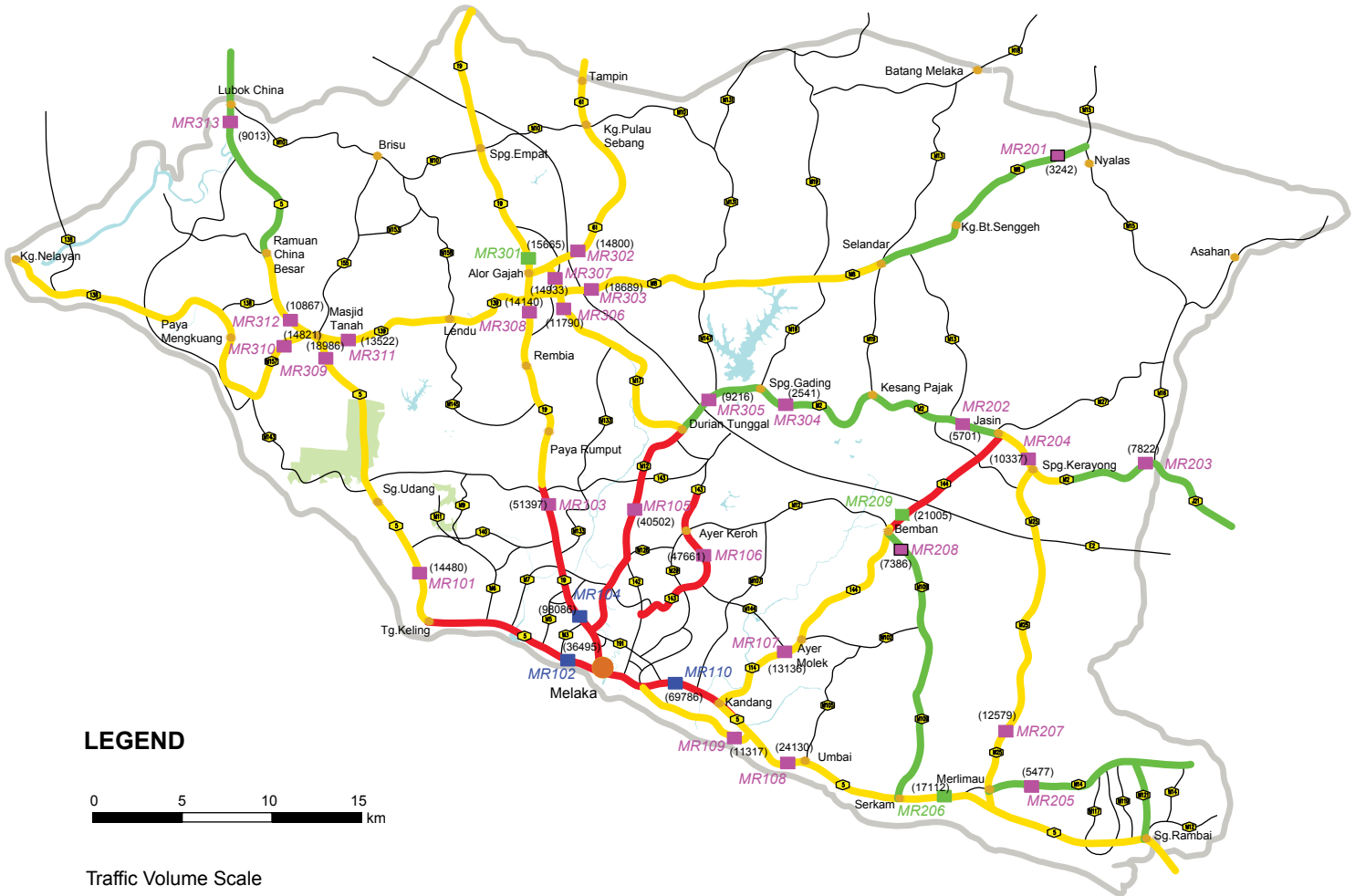


Figure 3.8-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Melaka

Traffic growth rate recorded for the state of Melaka is 2.91% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Melaka.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **MELAKA**





Legoland Malaysia Resort

JOHOR

DARUL TAKZIM

75 Census Stations

Road Length : **21,588.01 km***

Land Area : **19,210 km²****

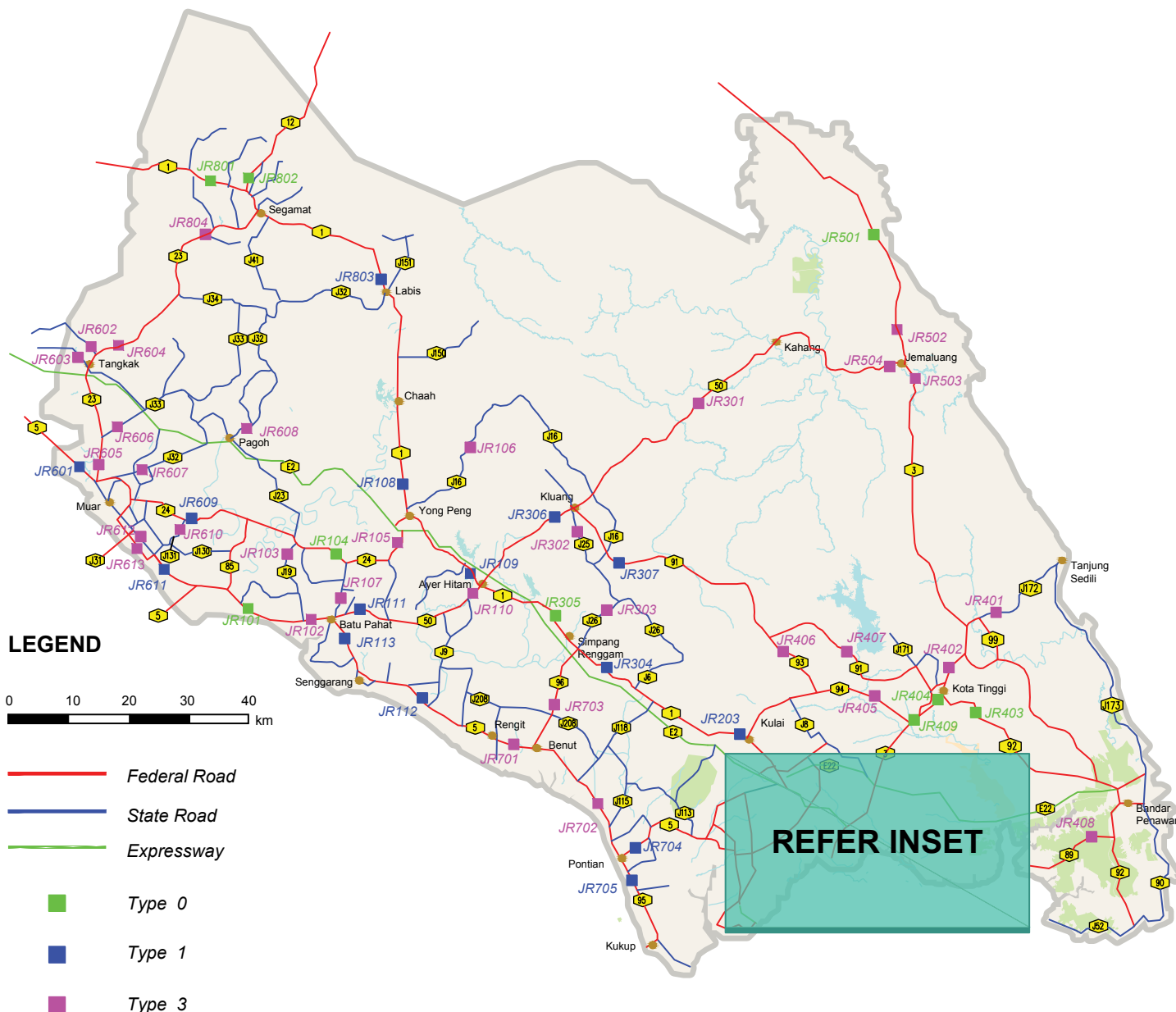
Population : **3,233,434 people****

*Source : Road Facilities Maintenance Division, JKR Malaysia

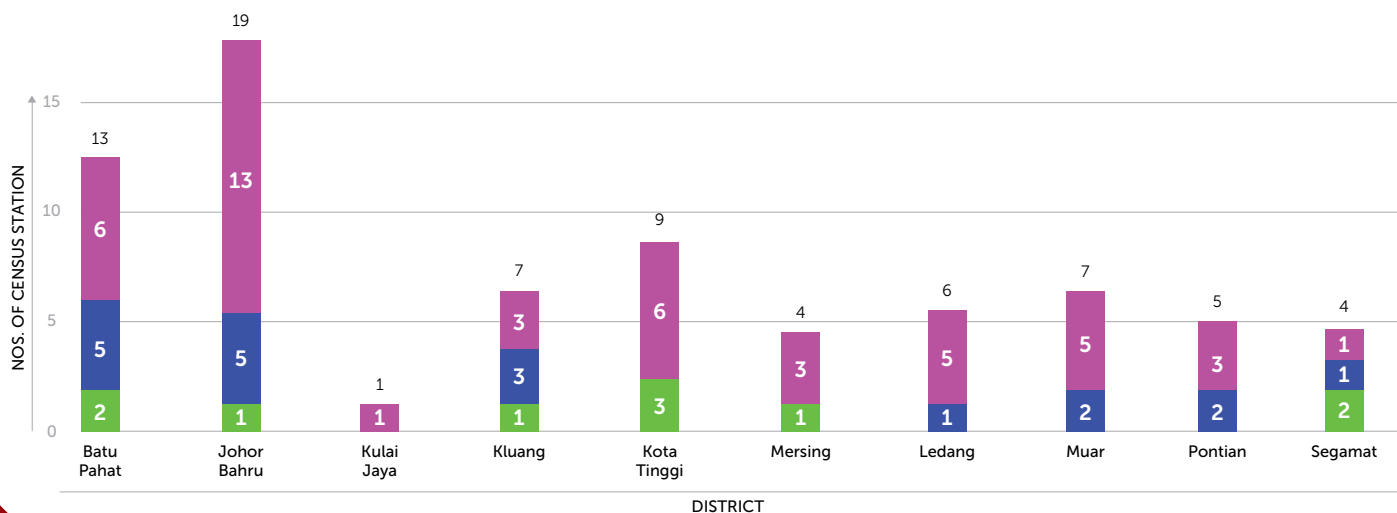
**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **JOHOR**

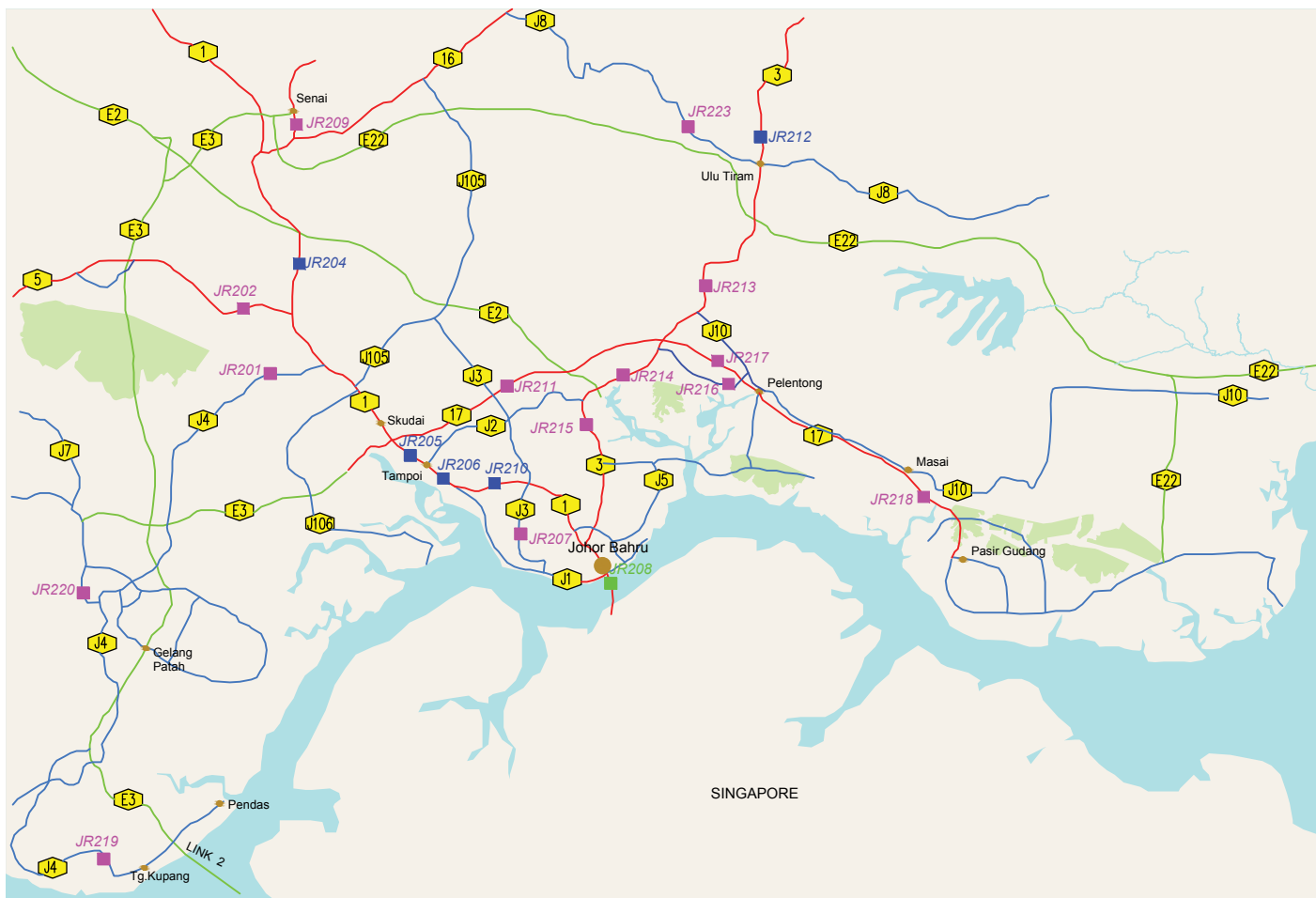


DISTRIBUTION OF SURVEY STATIONS

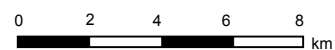


TRAFFIC CENSUS STATION MAP

STATE : **JOHOR (INSET)**



LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **JOHOR**

District : **BATU PAHAT**

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
JR101	0	5	142.0	Batu Pahat - Muar	N : 1° 51' 50.5" E : 102° 48' 55.0"	Single	2
JR102	3	5	127.5	Batu Pahat - Muar	N : 1° 50' 57.2" E : 102° 54' 17.7"	Single	2
JR103	3	J19	142.5	Yong Peng - Parit Sulong	N : 1° 59' 28.8" E : 102° 52' 21.5"	Single	2
JR104	0	24	127.2	Yong Peng - Muar	N : 1° 56' 56.1" E : 102° 57' 38.1"	Dual	4
JR105	3	24	115.9	Yong Peng - Muar	N : 1° 58' 21.3" E : 103° 02' 00.1"	Single	2
JR106	3	J16	122.4	Yong Peng - Kangkar Bharu	N : 2° 03' 45.3" E : 103° 07' 15.3"	Single	2
JR107	3	J13	7.2	Batu Pahat - Yong Peng	N : 1° 53' 58.2" E : 102° 56' 55.5"	Single	2
JR108	1	1	116.0	Johor Bahru - Segamat	N : 2° 02' 10.6" E : 103° 03' 16.6"	Single	2
JR109	1	1	95.0	Ayer Hitam - Yong Peng	N : 1° 55' 35.5" E : 103° 10' 36.0"	Single	2
JR110	3	50	29.5	Ayer Hitam - Batu Pahat	N : 1° 53' 47.3" E : 103° 09' 41.0"	Dual	4
JR111	1	50	5.0	Batu Pahat - Ayer Hitam	N : 1° 51' 49.4" E : 102° 57' 52.4"	Dual	4
JR112	1	5	111.0	Pontian - Batu Pahat	N : 1° 43' 38.2" E : 103° 04' 27.4"	Single	2
JR113	1	5	129.0	Pontian - Batu Pahat	N : 1° 48' 55.4" E : 102° 57' 18.5"	Dual	4

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **JOHOR**

District : JOHOR BAHRU

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
JR201	3	J4	19.2	Johor Bahru - Gelang Patah	N : 1° 30' 41.6" E : 103° 37' 48.1"	Single	2
JR202	3	J5	17.2	Johor Bahru - Pontian (140m west of JB/Air Hitam/Pontian junction)	N : 1° 32' 55.7" E : 103° 39' 15.8"	Single	2
JR204	1	1	21.0	Johor Bahru - Ayer Hitam (400m north of Pontian road junction)	N : 1° 33' 01.6" E : 103° 39' 27.0"	Dual	6
JR205	1	1	9.0	Johor Bahru - Ayer Hitam	N : 1° 30' 01.2" E : 103° 41' 48.1"	Dual	6
JR206	1	1	6.0	Johor Bahru - Ayer Hitam (100m north of Jln Larkin/Skudai junction)	N : 1° 29' 16.5" E : 103° 42' 49.0"	Dual	6
JR207	3	1	6.5	Johor Bahru - Skudai	N : 1° 28' 58.1" E : 103° 43' 15.2"	Dual	6
JR208	0	1	-	At the causeway 500m yards from Johor Bahru - Singapore	N : 1° 27' 46.3" E : 103° 46' 00.1"	Dual	6
JR210	1	1	5.0	Johor Bahru - Ayer Hitam	N : 1° 29' 15.6" E : 103° 43' 33.2"	Dual	4
JR211	3	17	6.0	Johor Bahru - Pasir Gudang (1km east of junction to Kempas)	N : 1° 30' 34.2" E : 103° 42' 40.7"	Dual	4
JR212	1	3	22.0	Johor Bahru - Kota Tinggi	N : 1° 36' 59.4" E : 103° 49' 18.1"	Dual	4
JR213	3	3	16.0	Johor Bahru - Kota Tinggi	N : 1° 34' 02.6" E : 103° 48' 43.9"	Dual	6
JR214	3	3	9.8	Johor Bahru - Kota Tinggi (100m east of Kangkar Tebrau junction)	N : 1° 31' 34.3" E : 103° 46' 23.9"	Dual	6
JR215	3	3	6.4	Johor Bahru - Kota Tinggi	N : 1° 30' 21.6" E : 103° 45' 46.4"	Dual	6
JR216	3	J10	14.0	Johor Bahru - Masai		Dual	4
JR217	3	17	26.0	40m west of junction to Johor Bahru - Pelentong	N : 1° 32' 00.6" E : 103° 48' 02.9"	Dual	4
JR218	3	17	35.0	Johor Bahru - Masai (1km east junction to Masai)	N : 1° 28' 48.6" E : 103° 53' 14.6"	Dual	4
JR219	3	17	2.0	Taman Perling - 2nd Link	N : 1° 29' 43.8" E : 103° 40' 41.9"	Dual	6
JR220	3	J7	3.0	Ulu Choh - Gelang Patah	N : 1° 28' 54.8" E : 103° 34' 57.0"	Dual	4
JR223	3	J8/FT3	2.0	Johor Bahru - Kota Tinggi (200m Arah Barat - Simpang Ulu Tiram)	N : 1° 36' 27.4" E : 103° 48' 04.7"	Single	2

District : KULAI JAYA

JR209	3	16	3.0	Johor Bahru - Senai - Senai Airport	N : 1° 36' 36.6" E : 103° 39' 25.9"	Dual	4
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LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **JOHOR**

District : KLUANG

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
JR301	3	50	86.8	Batu Pahat - Kluang - Kahang	N : 2° 14' 40.2" E : 103° 34' 54.5"	Single	2
JR302	3	J25	102.9	Johor Bahru - Renggam - Kluang	N : 2° 00' 16.7" E : 103° 00' 21.8"	Dual	4
JR303	3	J26	83.7	Johor Bahru - Simpang Renggam - Renggam	N : 1° 52' 46.7" E : 103° 23' 17.7"	Single	2
JR304	1	1	71.4	Johor Bahru - Ayer Hitam	N : 1° 47' 46.8" E : 103° 20' 06.9"	Single	2
JR305	0	1	77.3	Johor Bahru - Ayer Hitam	N : 1° 50' 42.1" E : 103° 48' 18.1"	Single	2
JR306	1	50	49.1	Batu Pahat - Ayer Hitam - Kluang	N : 2° 00' 40.2" E : 103° 17' 1.1"	Dual	4
JR307	1	91	76.1	Batu Pahat - Kluang - Kota Tinggi	N : 2° 57' 02.7" E : 103° 23' 03.5"	Single	2

District : KOTA TINGGI

JR401	3	99	57.6	Johor Bahru - Kota Tinggi - Kampong Tanjong Lembu	N : 1° 51' 7.9" E : 103° 58' 48.8"	Single	2
JR402	3	3	48.3	Kota Tinggi - Mersing	N : 1° 45' 39.6" E : 103° 55' 33.6"	Single	2
JR403	0	92	49.9	Johor Bahru - Pengerang	N : 1° 43' 00.1" E : 103° 57' 39.0"	Single	2
JR404	0	3	38.6	Johor Bahru - Kota Tinggi	N : 1° 42' 37.0" E : 103° 52' 49.5"	Single	2
JR405	3	94	54.7	Johor Bahru - Kulai - Kota Tinggi	N : 1° 44' 02.8" E : 103° 42' 46.4"	Single	2
JR406	3	93	4.6	Simpang Kota Tinggi/Kulai - Simpang Kota Tinggi/ Kluang		Single	2
JR407	3	91	7.0	Kota Tinggi - Kluang	N : 1° 42' 37.0" E : 103° 52' 49.5"	Single	2
JR408	3	89	16.0	Simpang Kota Tinggi / Sg.Rengit - Tg. Belungkor	N : 1° 30' 01.0" E : 104° 11' 51.3"	Single	2
JR409	0	3	36.8	Johor Bahru - Kota Tinggi	N : 1° 44' 02.6" E : 103° 54' 49.5"	Single	2

District : MERSING

JR501	0	3	135.0	Johor Bahru - Endau (2.4km north of Mersing town)	N : 2° 27' 01.6" E : 103° 49' 47.9"	Single	2
JR502	3	3	114.0	Johor Bahru - Jemaluang - Mersing	N : 2° 17' 04.1" E : 103° 51' 25.4"	Single	2
JR503	3	3	111.0	Johor Bahru - Kota Tinggi - Jemaluang (500m south of Jemaluang)	N : 2° 16' 05.1" E : 103° 51' 15.7"	Single	2
JR504	3	50	137.0	Johor Bahru - Jemaluang (500m from Jemaluang)	N : 2° 16' 07" E : 103° 51' 10.5"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **JOHOR**

District : LEDANG

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
JR601	1	5	189.0	Johor Bahru - Muar - Melaka	N : 2° 04' 53.5" E : 102° 32' 35.9"	Dual	4
JR602	3	J123	1.0	Johor Bahru - Muar - Bekoh		Single	2
JR603	3	J21	2.0	Muar - Tangkak - Melaka	N : 2° 16' 46.7" E : 102° 31' 13.5"	Single	2
JR604	3	23	26.0	Muar - Tangkak - Sagil (east of Bekoh junction)	N : 2° 16' 15.9" E : 102° 32' 31.2"	Single	2
JR605	3	23	3.0	Johor Bahru - Muar - Segamat		Single	2
JR606	3	J33	4.0	Muar - Serom		Single	2

District : MUAR

JR607	3	J32	217.4	Johor Bahru - Muar - Labis		Single	2
JR608	3	J32	186.4	Johor Bahru - Muar - Lenga	N : 2° 05' 09.5" E : 102° 35' 27.2"	Single	2
JR609	1	24	161.5	Johor Bahru - Parit Sulong - Muar (west of junction to Parit Jawa)	N : 2° 00' 49.1" E : 102° 41' 51.6"	Single	2
JR610	3	J131	4.8	Parit Jawa - Parit Sulong (Jalan Mohammed)	N : 1° 58' 37.5" E : 102° 39' 57.6"	Single	2
JR611	1	5	162.8	Johor Bahru - Batu Pahat - Muar	N : 1° 55' 16.2" E : 102° 40' 35.0"	Single	2
JR612	3	J31	169.4	Johor Bahru - Muar (Jalan Temenggong Ahmad)	N : 1° 59' 06.3" E : 102° 37' 12.5"	Single	2
JR613	3	5	167.0	Johor Bahru - Batu Pahat - Muar (coastal road)	N : 1° 59' 58.4" E : 102° 35' 41.7"	Single	2

District : PONTIAN

JR701	3	5	87.0	Johor Bahru - Pontian Kechil - Benut - Rengit	N : 1° 39' 29.1" E : 103° 12' 00.0"	Single	2
JR702	3	5	66.5	JB - Pontian Kechil - Pontian Besar (near Pontian Hospital)	N : 1° 29' 53.3" E : 103° 23' 07.2"	Single	2
JR703	3	96	6.0	Simpang Renggam - Benut	N : 1° 41' 46.1" E : 103° 17' 06.2"	Single	2
JR704	1	5	54.5	Johor Bahru - Pontian Kechil	N : 1° 30' 01.3" E : 103° 26' 31.4"	Single	2
JR705	1	95	1.0	Johor Bahru - Pontian Kechil - Kukup	N : 1° 28' 29.7" E : 103° 23' 40.0"	Single	2

District : SEGAMAT

JR801	0	1	200.0	Johor Bahru - Segamat - Batu Enam	N : 2° 34' 27.3" E : 102° 42' 32.5"	Single	2
JR802	0	12	50.0	Lebuh raya Tun Abdul Razak (500m Segamat - Kuantan junction)	N : 2° 32' 55.6" E : 102° 47' 36.6"	Single	2
JR803	1	1	158.0	Johor Bahru - Segamat(Labis)		Single	2
JR804	3	23	60.0	Johor Bahru - Segamat (Jementah)	N : 2° 28' 35.3" E : 102° 43' 05.4"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **JOHOR**

MARCH 2014

District : **BATU PAHAT**

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
JR101	18,891	15,638	1,149	1900-2000	73.3	6.6	4.3	0.8	1.1	13.9	100.0
JR102	-	23,417	2,393	0700-0800	59.2	6.8	6.8	3.3	1.2	22.6	100.0
JR103	-	9,552	870	1600-1700	37.2	9.4	13.1	12.0	0.7	27.7	100.0
JR104	40,354	33,816	2,932	1700-1800	27.9	25.3	22.8	16.7	0.3	6.9	100.0
JR105	-	16,277	1,297	0700-0800	52.2	10.3	13.2	11.2	0.8	12.2	100.0
JR106	-	4,422	342	0700-0800	47.2	7.4	4.7	1.8	0.4	38.6	100.0
JR107	-	33,443	2,880	1800-1900	61.1	8.5	7.3	3.6	0.5	19.1	100.0
JR108	-	11,507	974	1700-1800	51.6	13.9	11.5	7.4	1.3	14.1	100.0
JR109	-	10,590	803	1700-1800	48.5	13.2	12.4	7.6	0.6	17.7	100.0
JR110	-	25,189	2,269	0700-0800	57.7	12.9	8.8	4.2	1.2	15.1	100.0
JR111	-	71,599	6,659	0700-0800	60.4	3.4	3.1	1.7	0.7	30.7	100.0
JR112	-	12,920	949	1700-1800	52.6	8.9	8.4	1.5	1.1	27.6	100.0
JR113	-	42,292	3,481	1800-1900	72.8	7.2	5.3	0.6	0.5	13.5	100.0

District : **JOHOR BAHRU**

JR201	-	38,566	4,779	0700-0800	60.1	5.1	4.0	1.2	1.0	28.7	100.0
JR202	-	123,241	11,443	0800-0900	68.6	4.8	3.8	1.4	1.0	20.5	100.0
JR204	-	124,991	10,155	0700-0800	71.5	8.0	3.0	3.0	2.9	11.6	100.0
JR205	-	196,565	15,670	0700-0800	76.8	2.8	1.8	1.0	1.5	15.9	100.0
JR206	-	163,698	11,096	1700-1800	74.0	2.7	1.5	0.9	1.7	19.2	100.0
JR207	-	84,131	7,403	0700-0800	76.9	5.5	1.9	1.9	1.4	12.5	100.0
JR208	161,085	128,495	17,874	0600-0700	45.5	1.7	0.9	1.7	1.8	48.5	100.0
JR210	-	146,564	11,456	1700-1800	69.1	4.0	2.0	0.8	1.3	22.7	100.0
JR211	-	92,775	8,526	1800-1900	67.5	6.9	6.1	2.4	0.8	16.2	100.0
JR212	-	36,262	3,121	1700-1800	72.3	6.3	5.5	4.0	1.1	10.8	100.0
JR213	-	135,166	10,508	0700-0800	72.8	3.9	5.6	4.5	1.0	12.2	100.0
JR214	-	147,137	12,198	1400-1500	73.7	3.0	3.3	1.3	0.9	17.8	100.0
JR215	-	66,955	5,342	1600-1700	81.4	1.6	0.8	0.3	1.4	14.5	100.0
JR216	-	36,346	3,259	1500-1600	83.4	3.8	2.2	0.9	0.7	9.0	100.0
JR217	-	114,278	14,332	0800-0900	71.4	3.3	6.3	5.9	0.4	12.7	100.0
JR218	-	35,192	5,637	0700-0800	61.5	3.7	4.5	7.0	0.8	22.5	100.0
JR219	-	106,017	7,982	1900-2000	72.8	5.0	3.5	1.5	0.6	16.5	100.0
JR220	-	44,094	5,377	0700-0800	67.2	5.9	4.6	3.6	0.4	18.3	100.0
JR223	-	16,041	1,373	2000-2100	66.4	5.9	6.5	3.2	1.0	16.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **JOHOR**

MARCH 2014

District : KULAI JAYA

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
JR209	-	36,374	3,154	0800-0900	66.6	8.1	5.9	4.9	4.0	10.5	100.0

District : KLUANG

JR301	-	5,916	483	1300-1400	43.1	17.1	11.0	14.9	1.1	12.7	100.0
JR302	-	12,707	1,516	1400-1500	62.1	7.9	4.2	1.8	1.2	22.9	100.0
JR303	-	7,335	645	1400-1500	60.6	13.2	7.1	6.3	1.1	11.7	100.0
JR304	-	9,592	791	1400-1500	48.7	11.9	12.4	10.9	0.7	15.4	100.0
JR305	19,525	17,005	1,519	1800-1900	49.0	9.4	13.4	7.4	0.7	20.1	100.0
JR306	-	38,528	3,161	1700-1800	68.5	8.5	5.3	2.9	1.1	13.7	100.0
JR307	-	9,815	759	1500-1600	61.3	9.2	7.3	6.7	0.5	14.9	100.0

District : KOTA TINGGI

JR401	-	7,576	673	1700-1800	49.9	9.2	5.7	6.7	0.9	27.6	100.0
JR402	-	18,277	1,575	2100-2200	67.2	8.6	6.1	7.4	1.1	9.8	100.0
JR403	19,173	17,045	1,282	1800-1900	75.7	5.7	4.0	2.0	1.0	11.6	100.0
JR404	22,749	20,238	1,593	1800-1900	66.1	9.4	6.8	1.9	1.4	14.3	100.0
JR405	-	4,797	423	1700-1800	62.0	10.8	5.5	4.8	0.5	16.4	100.0
JR406	-	6,558	520	2100-2200	55.9	7.5	7.6	12.5	1.0	15.4	100.0
JR407	-	5,298	522	2100-2200	51.0	10.1	7.2	4.1	0.6	27.0	100.0
JR408	-	4,303	353	2100-2200	53.6	7.6	10.2	4.7	1.8	22.2	100.0
JR409	16,257	14,275	1,204	0700-0800	67.1	7.1	8.2	8.8	1.3	7.5	100.0

District : MERSING

JR501	17,170	14,583	1,255	1400-1500	56.3	5.7	6.3	2.9	0.7	28.2	100.0
JR502	-	5,872	611	1200-1300	63.3	9.0	9.1	6.8	1.7	10.1	100.0
JR503	-	4,143	361	1200-1300	48.7	14.2	12.6	12.9	1.7	9.8	100.0
JR504	-	1,096	121	1400-1500	27.6	27.8	10.0	15.2	0.8	18.4	100.0

District : LEDANG

JR601	-	16,505	1,614	1800-1900	67.2	4.2	9.9	1.8	1.0	15.9	100.0
JR602	-	4,986	425	0900-1000	51.1	14.7	6.6	0.4	0.3	26.8	100.0
JR603	-	10,972	1,140	1700-1800	48.3	13.5	8.9	1.1	0.3	27.8	100.0
JR604	-	18,737	2,171	0700-0800	48.1	14.6	8.2	1.5	1.0	26.6	100.0
JR605	-	23,442	2,175	0700-0800	65.1	6.4	8.8	1.8	1.1	16.9	100.0
JR606	-	15,765	1,525	0700-0800	61.3	6.2	7.5	1.1	0.9	23.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **JOHOR**

MARCH 2014

District : MUAR

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
JR607	-	2,333	252	1800-1900	45.1	17.6	8.8	0.8	0.6	27.1	100.0
JR608	-	19,776	1,662	1600-1700	47.4	15.8	11.0	3.2	1.0	21.6	100.0
JR609	-	7,613	638	1200-1300	49.5	11.3	17.0	6.1	0.7	15.4	100.0
JR610	-	4,467	613	1600-1700	50.3	10.1	13.9	5.4	0.0	20.3	100.0
JR611	-	14,415	1,116	1700-1800	65.0	5.8	7.4	1.2	0.8	19.7	100.0
JR612	-	12,852	1,059	1700-1800	53.0	13.6	6.9	1.2	0.5	24.8	100.0
JR613	-	9,313	805	1800-1900	62.9	10.2	5.7	0.7	0.8	19.7	100.0

District : PONTIAN

JR701	-	10,696	931	0700-0800	60.9	4.0	9.1	1.4	0.9	23.7	100.0
JR702	-	16,616	1,592	1700-1800	70.9	3.5	6.2	1.3	0.7	17.4	100.0
JR703	-	7,762	878	1100-1200	59.3	4.1	11.6	3.0	0.8	21.1	100.0
JR704	-	15,855	1,194	0700-0800	53.3	16.1	7.7	3.6	1.6	17.7	100.0
JR705	-	17,772	1,269	1800-1900	67.5	7.0	4.0	1.2	0.5	19.9	100.0

District : SEGAMAT

JR801	20,011	18,233	1,363	1800-1900	57.6	7.9	6.6	5.0	0.7	22.2	100.0
JR802	16,081	14,144	1,174	1800-1900	65.6	9.2	6.6	6.2	1.2	11.2	100.0
JR803	-	11,963	1,009	1700-1800	64.1	8.2	9.2	7.2	1.2	10.0	100.0
JR804	-	10,582	1,492	1600-1700	55.4	15.7	9.4	4.0	2.8	12.6	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **JOHOR**

SEPTEMBER 2014

District : BATU PAHAT

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
JR101	18,699	15,344	1,199	1800-1900	69.4	6.1	4.2	0.9	1.4	18.1	100.0
JR102	-	19,440	1,680	1000-1100	58.8	12.0	8.6	7.4	1.2	12.0	100.0
JR103	-	4,813	380	1100-1200	29.9	16.5	16.7	15.5	1.1	20.3	100.0
JR104	37,498	31,699	3,049	1700-1800	32.1	25.6	20.5	16.9	0.3	4.6	100.0
JR105	-	13,113	1,052	1600-1700	50.5	13.8	12.9	11.1	0.8	10.9	100.0
JR106	-	2,699	249	1500-1600	28.5	15.5	14.9	13.9	1.3	25.9	100.0
JR107	-	20,794	1,832	0900-1000	62.7	10.5	8.9	4.4	0.7	12.8	100.0
JR108	-	11,536	1,124	1700-1800	52.0	14.7	11.8	7.7	1.3	12.5	100.0
JR109	-	10,089	750	1300-1400	49.5	13.0	12.1	8.4	0.6	16.4	100.0
JR110	-	20,991	1,763	1700-1800	61.5	10.2	8.5	4.3	1.5	13.9	100.0
JR111	-	53,219	3,969	1700-1800	56.4	8.0	6.0	3.0	0.8	25.7	100.0
JR112	-	12,813	943	1600-1700	55.7	9.3	9.8	1.6	1.1	22.4	100.0
JR113	-	41,836	3,135	1800-1900	74.3	6.5	4.9	0.5	0.4	13.4	100.0

District : JOHOR BAHRU

JR201	-	37,152	4,312	1800-1900	55.5	7.0	4.9	1.5	1.2	29.8	100.0
JR202	-	129,243	13,140	1800-1900	71.1	5.5	4.4	1.6	0.9	16.4	100.0
JR204	-	85,891	7,274	1800-1900	72.9	5.7	4.9	3.1	3.0	10.4	100.0
JR205	-	186,288	14,621	1200-1300	76.2	2.7	1.8	1.0	1.6	16.8	100.0
JR206	-	154,617	13,149	0700-0800	71.0	3.8	1.9	0.8	1.9	20.7	100.0
JR207	-	79,316	6,912	1800-1900	77.9	5.8	1.9	1.0	1.5	11.9	100.0
JR208	132,569	101,771	9,957	0700-0800	36.8	1.7	0.9	2.3	2.0	56.3	100.0
JR210	-	143,704	11,019	1800-1900	71.0	3.2	1.9	0.6	1.3	22.0	100.0
JR211	-	95,657	7,812	1800-1900	70.4	6.8	6.0	2.8	0.6	13.5	100.0
JR212	-	32,388	2,643	1800-1900	73.3	6.0	5.2	4.2	1.2	10.1	100.0
JR213	-	141,385	22,376	0700-0800	62.5	6.2	6.0	4.7	0.9	19.6	100.0
JR214	-	141,966	11,451	0800-0900	73.0	5.1	3.5	1.3	1.1	15.9	100.0
JR215	-	66,484	5,527	0800-0900	76.6	3.7	2.2	0.4	1.2	16.0	100.0
JR216	-	26,933	2,628	0800-0900	77.3	5.8	3.7	0.6	1.0	11.5	100.0
JR217	-	103,897	9,142	1700-1800	72.5	5.7	6.1	5.2	0.4	10.1	100.0
JR218	-	17,811	2,692	0700-0800	69.8	5.1	3.0	4.6	1.2	16.3	100.0
JR219	-	99,812	9,055	1700-1800	72.9	5.8	1.4	0.8	0.5	18.6	100.0
JR220	-	43,665	4,423	0700-0800	64.9	7.9	5.0	4.1	0.4	17.7	100.0
JR223	-	15,361	2,115	0700-0800	62.5	7.5	7.0	3.8	1.0	18.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **JOHOR**

SEPTEMBER 2014

District : KULAI JAYA

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
JR209	-	44,534	6,326	1800-1900	65.4	5.9	4.8	4.1	2.2	17.7	100.0

District : KLUANG

JR301	-	5,910	506	1300-1400	42.8	17.7	11.5	14.7	0.7	12.6	100.0
JR302	-	17,433	1,967	1800-1900	60.1	11.6	3.9	1.7	1.3	21.3	100.0
JR303	-	8,547	741	1500-1600	54.2	12.4	10.4	6.4	1.4	15.2	100.0
JR304	-	7,370	608	0700-0800	45.2	6.0	18.7	13.8	0.9	15.4	100.0
JR305	17,163	14,689	1,251	1700-1800	56.0	9.6	11.2	8.5	0.6	14.1	100.0
JR306	-	38,204	3,196	1700-1800	65.4	10.7	5.6	2.9	1.1	14.2	100.0
JR307	-	13,362	995	1800-1900	65.8	8.5	5.9	5.1	0.7	14.0	100.0

District : KOTA TINGGI

JR401	-	5,832	442	2100-2200	51.0	11.6	7.2	7.0	0.6	22.7	100.0
JR402	-	17,913	1,492	2100-2200	69.1	10.1	3.8	3.8	0.9	12.2	100.0
JR403	20,895	18,495	1,475	1800-1900	75.8	5.9	4.5	2.0	0.8	10.9	100.0
JR404	21,582	19,262	1,612	1700-1800	68.1	9.8	6.4	1.7	1.4	12.6	100.0
JR405	-	5,789	522	2100-2200	56.4	10.5	8.8	12.5	0.8	11.0	100.0
JR406	-	5,986	599	2100-2200	55.2	11.0	9.4	13.9	1.2	9.3	100.0
JR407	-	4,478	383	2100-2200	59.8	10.5	5.0	3.7	0.3	20.8	100.0
JR408	-	3,772	341	2100-2200	60.2	9.3	7.9	2.5	1.2	18.9	100.0
JR409	15,584	13,710	1,131	0700-0800	67.1	7.4	7.9	7.9	1.2	8.6	100.0

District : MERSING

JR501	16,056	14,199	1,188	1700-1800	51.2	7.5	6.1	3.3	0.7	31.3	100.0
JR502	-	5,193	540	1200-1300	61.8	11.5	10.5	7.3	1.5	7.4	100.0
JR503	-	4,613	394	1200-1300	46.0	13.9	13.6	13.5	2.3	10.8	100.0
JR504	-	1,101	118	1400-1500	27.5	27.7	10.0	15.6	0.8	18.3	100.0

District : LEDANG

JR601	-	20,612	2,186	1800-1900	72.4	3.1	8.3	1.5	0.8	14.0	100.0
JR602	-	4,660	430	0700-0800	35.9	17.3	17.7	2.0	0.3	26.8	100.0
JR603	-	10,949	1,098	1700-1800	48.1	13.3	9.2	1.2	0.3	27.9	100.0
JR604	-	16,690	2,174	0700-0800	54.7	12.6	7.4	1.4	1.0	22.9	100.0
JR605	-	20,951	1,989	0700-0800	66.0	6.2	7.5	2.6	1.1	16.6	100.0
JR606	-	16,927	1,813	1900-2000	60.1	12.3	8.6	0.8	0.7	17.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **JOHOR**

SEPTEMBER 2014

District : MUAR

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
JR607	-	4,101	394	1400-1500	40.6	10.5	11.4	2.1	0.4	34.9	100.0
JR608	-	19,715	1,637	0900-1000	53.9	8.6	9.8	3.8	1.0	22.9	100.0
JR609	-	6,479	541	0800-0900	48.1	11.0	16.9	12.1	0.4	11.5	100.0
JR610	-	4,672	437	0700-0800	36.8	11.7	24.1	5.2	0.1	22.1	100.0
JR611	-	13,324	1,207	1800-1900	61.3	8.4	7.2	2.0	0.9	20.2	100.0
JR612	-	13,387	1,066	1600-1700	63.9	6.6	7.9	1.9	0.8	19.0	100.0
JR613	-	8,419	812	1800-1900	57.5	7.2	5.7	1.3	0.8	27.6	100.0

District : PONTIAN

JR701	-	10,018	843	0700-0800	59.1	4.6	8.5	3.7	0.9	23.2	100.0
JR702	-	12,740	1,213	1400-1500	71.6	3.5	4.9	4.2	0.8	14.9	100.0
JR703	-	5,576	588	0700-0800	58.3	4.3	9.0	8.1	0.9	19.4	100.0
JR704	-	13,985	1,089	1400-1500	61.2	10.9	7.8	2.7	1.9	15.5	100.0
JR705	-	17,294	1,262	1700-1800	64.7	9.8	5.2	0.9	0.5	18.9	100.0

District : SEGAMAT

JR801	18,047	15,366	1,233	1300-1400	53.5	9.8	7.5	6.1	0.8	22.2	100.0
JR802	16,747	15,046	1,187	1700-1800	59.4	10.5	7.0	12.3	0.7	10.1	100.0
JR803	-	11,473	998	1700-1800	64.4	8.9	9.4	7.2	1.3	8.9	100.0
JR804	-	8,341	1,228	1500-1600	53.9	12.1	15.0	6.7	1.8	10.5	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **JOHOR**

AVERAGE 2014

District : BATU PAHAT

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
JR101	15,491	1,174	71.3	6.3	4.2	0.9	1.2	16.0	B
JR102	21,429	2,037	59.0	9.4	7.7	5.4	1.2	17.3	F
JR103	7,183	625	33.6	12.9	14.9	13.8	0.9	24.0	B
JR104	32,757	2,991	30.0	25.5	21.6	16.8	0.3	5.8	F
JR105	14,695	1,175	51.3	12.0	13.1	11.2	0.8	11.6	F
JR106	3,561	296	37.8	11.5	9.8	7.8	0.8	32.3	A
JR107	27,119	2,356	61.9	9.5	8.1	4.0	0.6	15.9	F
JR108	11,521	1,049	51.8	14.3	11.7	7.6	1.3	13.3	D
JR109	10,339	776	49.0	13.1	12.3	8.0	0.6	17.1	B
JR110	23,090	2,016	59.6	11.6	8.7	4.3	1.4	14.5	A
JR111	62,409	5,314	58.4	5.7	4.5	2.3	0.8	28.2	F
JR112	12,867	946	54.1	9.1	9.1	1.5	1.1	25.0	B
JR113	42,064	3,308	73.6	6.8	5.1	0.5	0.5	13.4	B

District : JOHOR BAHRU

JR201	37,859	4,546	57.8	6.1	4.5	1.3	1.1	29.3	F
JR202	126,242	12,292	69.9	5.2	4.1	1.5	0.9	18.5	F
JR204	105,441	8,715	72.2	6.8	3.9	3.1	2.9	11.0	F
JR205	191,427	15,145	76.5	2.8	1.8	1.0	1.6	16.4	F
JR206	159,157	12,123	72.5	3.3	1.7	0.8	1.8	19.9	F
JR207	81,724	7,158	77.4	5.6	1.9	1.4	1.5	12.2	D
JR208	115,133	13,916	41.1	1.7	0.9	2.0	1.9	52.4	F
JR210	145,134	11,238	70.1	3.6	1.9	0.7	1.3	22.4	F
JR211	94,216	8,169	68.9	6.9	6.0	2.6	0.7	14.9	F
JR212	34,325	2,882	72.8	6.2	5.3	4.1	1.1	10.5	B
JR213	138,276	16,442	67.6	5.0	5.8	4.6	1.0	15.9	F
JR214	144,552	11,825	73.4	4.0	3.4	1.3	1.0	16.9	F
JR215	66,720	5,435	79.0	2.6	1.5	0.4	1.3	15.2	A
JR216	31,640	2,944	80.3	4.8	3.0	0.8	0.8	10.3	A
JR217	109,088	11,737	72.0	4.5	6.2	5.6	0.4	11.4	F
JR218	26,502	4,165	65.7	4.4	3.7	5.8	1.0	19.4	E
JR219	102,915	8,519	72.9	5.4	2.5	1.2	0.6	17.5	E
JR220	43,880	4,900	66.0	6.9	4.8	3.9	0.4	18.0	F
JR223	15,701	1,744	64.5	6.7	6.8	3.5	1.0	17.6	F

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **JOHOR**

AVERAGE 2014

District : KULAI JAYA

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
JR209	40,454	4,740	66.0	7.0	5.3	4.5	3.1	14.1	F

District : KLUANG

JR301	5,913	495	42.9	17.4	11.2	14.8	0.9	12.7	A
JR302	15,070	1,742	61.1	9.8	4.1	1.7	1.3	22.1	F
JR303	7,941	693	57.4	12.8	8.7	6.4	1.2	13.5	A
JR304	8,481	700	47.0	8.9	15.6	12.4	0.8	15.4	B
JR305	15,847	1,385	52.5	9.5	12.3	7.9	0.6	17.1	F
JR306	38,366	3,179	66.9	9.6	5.5	2.9	1.1	14.0	F
JR307	11,589	877	63.5	8.9	6.6	5.9	0.6	14.5	A

District : KOTA TINGGI

JR401	6,704	1,391	55.7	8.5	5.2	3.8	0.6	26.3	D
JR402	18,095	1,534	68.2	9.3	4.9	5.6	1.0	11.0	F
JR403	17,770	1,379	75.8	5.8	4.3	2.0	0.9	11.3	C
JR404	19,750	1,603	67.1	9.6	6.6	1.8	1.4	13.5	F
JR405	5,293	473	59.2	10.7	7.2	8.6	0.6	13.7	A
JR406	6,272	560	55.5	9.3	8.5	13.2	1.1	12.3	A
JR407	4,888	453	55.4	10.3	6.1	3.9	0.5	23.9	A
JR408	4,038	347	56.9	8.5	9.0	3.6	1.5	20.5	A
JR409	13,993	1,168	67.1	7.2	8.0	8.4	1.2	8.1	D

District : MERSING

JR501	14,391	1,221	53.7	6.6	6.2	3.1	0.7	29.8	C
JR502	5,533	576	62.5	10.3	9.8	7.0	1.6	8.7	A
JR503	4,381	378	47.4	14.0	13.1	13.2	2.0	10.3	A
JR504	1,099	120	27.6	27.8	10.0	15.4	0.8	18.4	A

District : LEDANG

JR601	18,558	1,900	69.8	3.6	9.1	1.7	0.9	14.9	A
JR602	4,823	428	43.5	16.0	12.1	1.2	0.3	26.8	A
JR603	10,961	1,119	48.2	13.4	9.1	1.2	0.3	27.9	C
JR604	17,714	2,173	51.4	13.6	7.8	1.5	1.0	24.8	F
JR605	22,197	2,082	65.5	6.3	8.2	2.2	1.1	16.7	F
JR606	16,346	1,669	60.7	9.2	8.0	0.9	0.8	20.2	F

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **JOHOR**

AVERAGE 2014

District : MUAR

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
JR607	3,217	323	42.9	14.0	10.1	1.5	0.5	31.0	A
JR608	19,746	1,650	50.7	12.2	10.4	3.5	1.0	22.2	F
JR609	7,046	589	48.8	11.1	17.0	9.1	0.5	13.4	A
JR610	4,570	525	43.5	10.9	19.0	5.3	0.1	21.2	A
JR611	13,869	1,162	63.2	7.1	7.3	1.6	0.9	20.0	A
JR612	13,120	1,063	58.4	10.1	7.4	1.6	0.6	21.9	B
JR613	8,866	809	60.2	8.7	5.7	1.0	0.8	23.6	A

District : PONTIAN

JR701	10,357	887	60.0	4.3	8.8	2.5	0.9	23.5	A
JR702	14,678	1,403	71.3	3.5	5.5	2.8	0.8	16.2	D
JR703	6,669	733	58.8	4.2	10.3	5.5	0.9	20.3	A
JR704	14,920	1,141	57.3	13.5	7.8	3.1	1.7	16.6	C
JR705	17,533	1,265	66.1	8.4	4.6	1.0	0.5	19.4	C

District : SEGAMAT

JR801	16,800	1,298	55.5	8.8	7.1	5.5	0.8	22.2	C
JR802	14,595	1,181	62.5	9.9	6.8	9.2	0.9	10.7	D
JR803	11,718	1,003	64.3	8.5	9.3	7.2	1.2	9.5	B
JR804	9,462	1,360	54.7	13.9	12.2	5.3	2.3	11.6	F

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **JOHOR**

District : **BATU PAHAT**

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
JR101	11,577	11,086	11,727	10,736	12,735	11,162	11,711	14,847	18,659	15,491	4.59	0.59
JR102	28,366	27,305	21,432	19,665	21,195	20,237	15,020	21,881	25,305	21,429	-2.30	0.15
JR103	8,856	9,360	8,239	5,509	8,649	6,539	15,428	7,866	8,531	7,183	0.03	0.00
JR104	10,052	17,891	24,014	32,094	33,381	25,916	40,092	23,361	34,672	32,757	9.42	0.49
JR105	20,722	20,521	13,494	14,764	15,369	14,770	15,230	15,993	16,189	14,695	-2.30	0.25
JR106	3,718	4,105	3,389	3,266	3,133	3,144	3,666	4,035	4,419	3,561	0.82	0.04
JR107	32,294	24,444	24,457	27,620	22,105	24,961	28,189	29,330	30,117	27,119	0.59	0.02
JR108	10,030	11,281	12,263	12,557	12,869	12,262	13,025	12,369	11,628	11,521	0.95	0.14
JR109	8,414	9,310	9,112	9,686	9,646	9,722	9,418	10,184	10,507	10,339	1.93	0.79
JR110	17,911	21,453	19,864	22,271	22,282	22,463	24,236	25,758	25,816	23,090	3.12	0.71
JR111	40,343	47,549	59,993	40,929	48,391	68,097	47,852	74,604	71,408	62,409	5.26	0.48
JR112	13,039	13,641	13,768	13,508	13,803	34,077	13,505	12,996	12,921	12,867	0.07	0.00
JR113	22,941	24,172	24,219	24,710	27,870	30,932	33,455	33,260	34,935	42,064	6.44	0.94

District : **JOHOR BAHRU**

JR201	15,212	17,951	21,682	21,466	24,684	36,243	32,527	35,398	40,123	37,859	10.86	0.91
JR202	59,976	69,894	67,190	78,069	91,544	100,402	96,248	126,786	126,934	126,242	8.95	0.94
JR204	76,418	77,733	115,506	97,582	99,254	101,856	107,591	104,684	114,704	105,441	3.30	0.48
JR205	191,864	199,433	187,687	154,952	218,035	221,084	213,390	162,454	189,292	191,427	-0.08	0.00
JR206	200,428	179,792	183,682	172,548	189,659	181,637	167,933	171,102	168,344	159,157	-1.80	0.67
JR207	58,078	56,108	59,563	42,635	62,177	59,676	75,358	78,405	98,298	81,724	6.09	0.60
JR208	96,135	111,237	122,851	128,068	141,198	161,424	217,277	157,555	137,107	115,133	3.67	0.23
JR210	139,270	109,251	128,573	116,611	143,369	153,246	142,980	153,822	134,361	145,134	2.06	0.31
JR211	60,223	67,849	58,382	80,232	87,976	95,655	101,081	110,548	112,581	94,216	6.99	0.78
JR212	36,537	37,327	36,118	39,508	44,448	36,424	34,111	36,709	36,170	34,325	-0.80	0.11
JR213	81,894	85,158	103,560	90,144	115,202	124,581	138,535	124,847	116,207	138,276	5.57	0.76
JR214	112,118	123,950	118,402	136,236	148,047	146,961	118,971	144,677	145,556	144,552	2.42	0.47
JR215	95,744	70,225	72,980	83,085	90,853	95,603	117,179	59,861	60,912	66,720	-2.50	0.12
JR216	35,950	34,810	64,908	29,348	33,820	34,422	32,865	70,925	34,264	31,640	-0.30	0.00
JR217	84,125	77,748	69,829	100,249	131,280	129,556	116,193	72,235	102,406	109,088	2.95	0.15
JR218	51,142	45,330	42,184	43,457	46,426	49,309	40,428	47,563	26,552	26,502	-5.60	0.50
JR219	-	18,641	46,015	87,857	95,096	116,486	131,153	123,232	117,251	102,915	17.73	0.58
JR220	-	6,118	6,817	9,095	11,091	22,276	26,675	27,101	40,304	43,880	27.12	0.96
JR223	-	15,533	15,698	17,810	18,708	16,529	18,747	18,383	18,371	15,701	0.97	0.11

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **JOHOR**

District : KULAI JAYA

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
JR209	42,877	27,226	27,118	29,106	25,673	26,689	28,084	30,378	43,167	40,454	1.94	0.08

District : KLUANG

JR301	12,521	4,362	4,796	5,443	5,177	5,210	5,208	5,432	6,223	5,913	-2.30	0.06
JR302	10,791	6,350	10,246	9,616	12,978	16,412	15,217	15,149	13,923	15,070	7.31	0.57
JR303	10,555	11,126	14,409	10,514	7,103	9,322	7,769	9,269	8,101	7,941	-4.60	0.44
JR304	7,638	7,590	7,846	7,203	7,585	7,705	7,469	7,889	8,496	8,481	1.14	0.43
JR305	13,590	15,248	15,381	14,708	15,261	14,810	14,894	15,398	13,911	15,847	0.46	0.08
JR306	30,642	31,429	30,231	33,897	33,572	34,964	36,952	39,674	38,053	38,366	3.04	0.88
JR307	5,567	6,045	6,731	7,550	8,585	8,479	8,336	8,293	8,960	11,589	6.47	0.86

District : KOTA TINGGI

JR401	10,297	5,616	14,513	14,695	13,494	6,676	16,043	7,372	7,859	6,704	-3.20	0.06
JR402	14,897	16,614	16,595	19,628	19,890	17,768	17,026	19,618	15,404	18,095	0.92	0.08
JR403	15,397	14,802	14,913	15,591	16,450	15,504	16,044	15,672	15,644	17,770	1.18	0.47
JR404	9,799	19,289	19,506	19,417	19,182	20,302	20,106	23,273	22,103	19,750	5.03	0.41
JR405	10,189	6,956	15,443	9,746	9,796	10,089	6,992	8,332	6,556	5,293	-6.30	0.39
JR406	9,499	9,688	8,298	8,725	9,643	6,672	7,703	6,535	5,908	6,272	-5.50	0.77
JR407	4,558	5,270	6,286	5,231	5,604	4,856	4,772	4,604	4,535	4,888	-1.50	0.18
JR408	3,959	7,071	4,188	4,212	4,141	3,784	4,042	4,514	4,926	4,038	-1.30	0.05
JR409	11,713	12,717	13,807	16,676	15,424	15,869	14,588	13,322	15,017	13,993	1.34	0.14

District : MERSING

JR501	13,986	17,332	18,563	17,192	16,688	15,598	13,445	13,411	14,412	14,391	-2.10	0.29
JR502	10,002	4,018	4,840	5,824	4,671	4,590	5,073	7,080	7,544	5,533	0.33	0.00
JR503	5,970	4,049	4,247	4,262	4,477	4,633	4,481	4,490	4,720	4,381	-0.80	0.05
JR504	959	758	794	841	1,032	1,062	1,126	1,055	1,178	1,099	4.02	0.62

District : LEDANG

JR601	17,884	14,272	15,766	20,782	23,513	20,582	20,376	19,157	16,513	18,558	1.29	0.07
JR602	4,161	4,334	4,390	4,266	4,616	5,022	5,230	4,690	4,579	4,823	1.66	0.47
JR603	6,808	9,678	6,793	7,682	9,293	12,793	11,166	9,917	11,017	10,961	5.17	0.52
JR604	15,557	11,339	11,587	13,746	14,292	12,866	12,493	14,246	14,989	17,714	2.28	0.25
JR605	23,578	29,638	33,229	32,018	33,881	31,746	26,870	25,276	26,589	22,197	-2.00	0.16
JR606	12,649	12,030	12,333	10,509	12,387	15,519	15,162	19,072	19,434	16,346	5.56	0.66

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **JOHOR**

District : MUAR

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
JR607	20,299	23,690	17,072	12,223	4,329	4,231	4,566	4,227	3,835	3,217	-23.80	0.84
JR608	26,527	29,201	25,207	23,100	16,391	17,594	17,384	16,027	16,327	19,746	-5.90	0.63
JR609	7,143	5,752	6,751	6,536	7,738	7,121	6,063	6,871	7,753	7,046	1.06	0.11
JR610	3,286	3,206	3,049	3,055	3,219	3,686	4,282	5,505	3,064	4,570	4.09	0.36
JR611	10,632	9,859	9,290	9,163	11,437	12,798	12,066	15,618	15,756	13,869	5.58	0.71
JR612	10,106	10,144	10,393	10,232	11,201	10,031	9,743	12,852	10,729	13,120	2.15	0.39
JR613	4,731	6,112	6,212	7,920	5,785	6,283	6,394	8,142	7,617	8,866	4.84	0.60

District : PONTIAN

JR701	9,302	9,692	8,877	9,193	9,965	10,068	12,845	10,080	11,176	10,357	2.19	0.38
JR702	14,191	20,095	13,926	17,789	14,480	14,406	12,125	16,772	15,061	14,678	-1.20	0.06
JR703	5,237	5,943	5,643	5,569	6,578	6,385	6,436	6,455	6,680	6,669	2.47	0.74
JR704	15,816	19,754	16,478	18,656	18,950	18,006	16,482	15,967	15,658	14,920	-1.70	0.28
JR705	13,590	16,372	16,891	17,535	18,470	20,268	18,103	17,452	18,948	17,533	2.22	0.40

District : SEGAMAT

JR801	10,947	12,282	13,880	14,145	14,648	15,237	15,781	15,875	16,826	16,800	4.30	0.89
JR802	12,099	12,375	12,322	12,367	12,779	12,968	13,938	14,985	14,283	14,595	2.45	0.86
JR803	9,938	10,240	11,060	10,875	11,031	11,067	12,085	12,418	12,342	11,718	2.24	0.80
JR804	7,317	7,526	8,037	8,074	8,024	9,900	9,561	10,614	12,257	9,462	4.75	0.74

STATISTIC FOR YEAR 2014

STATE : **JOHOR**

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

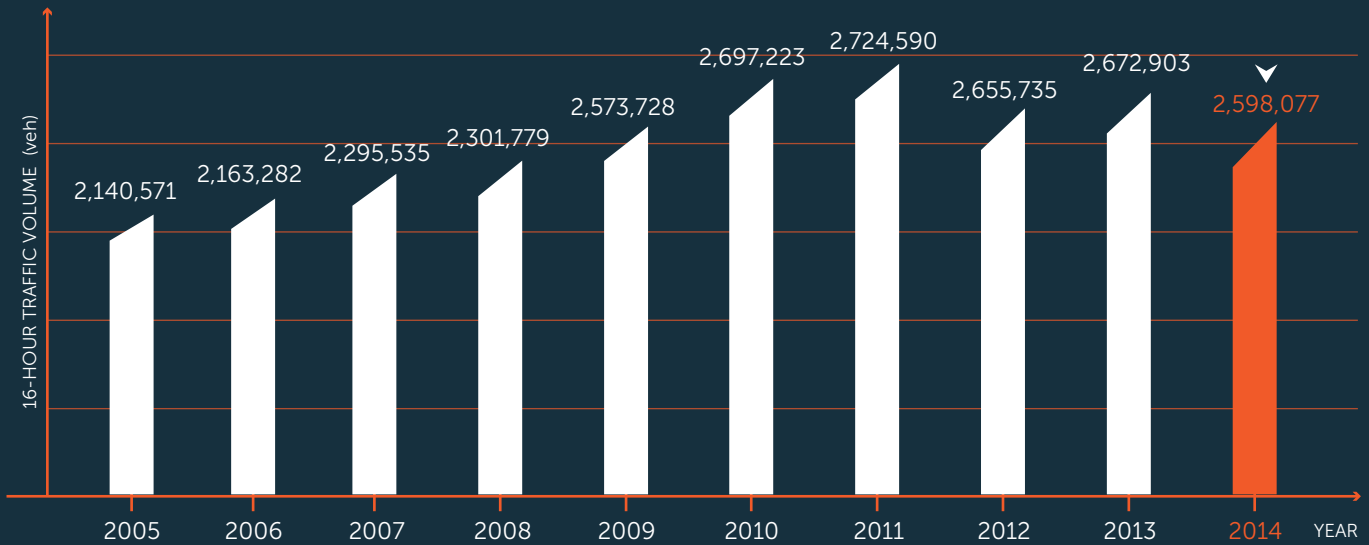


Figure 3.9-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Johor



There are 75 census stations in Johor. The 16-hour traffic volume documented shows increasing pattern from year 2005 until year 2011. However, there were dropping of the traffic volume in year 2012 and 2014. In 2014, the traffic volume decreased 2.80% which equivalent to 74,826 vehicles.

-2.80%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

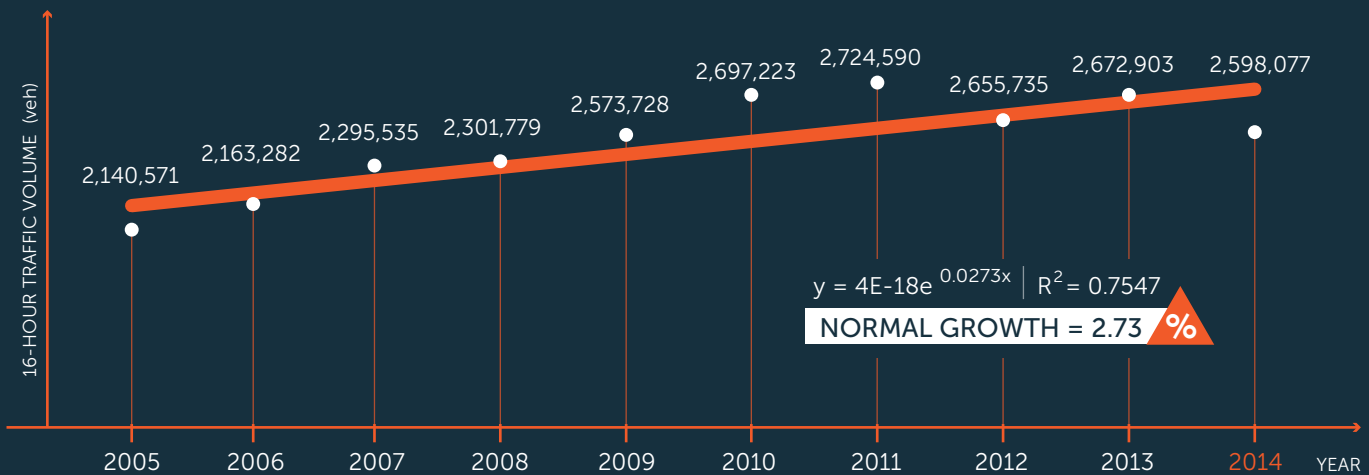
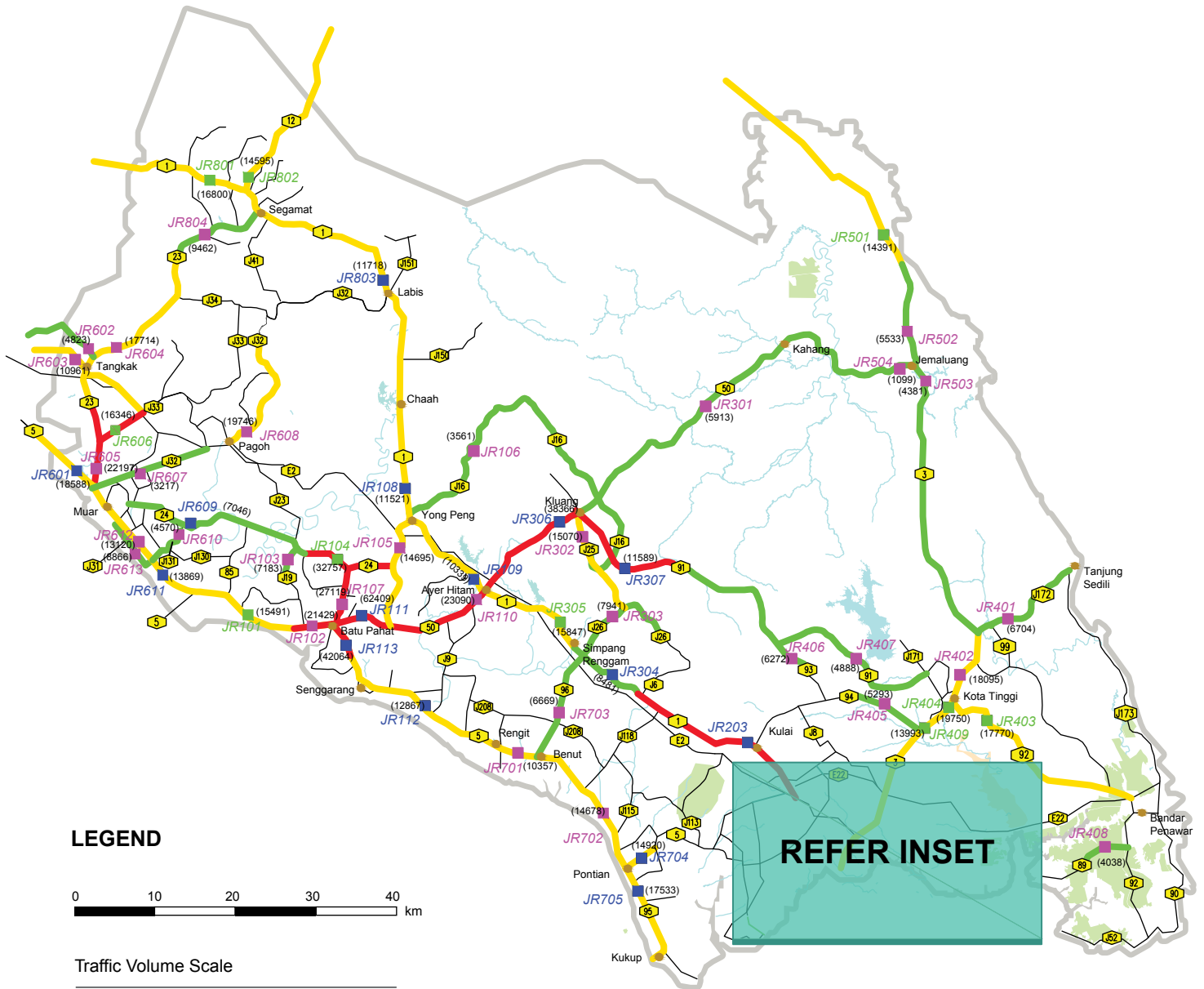


Figure 3.9-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Johor

Traffic growth rate recorded for the state of Johor is 2.73% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Johor.

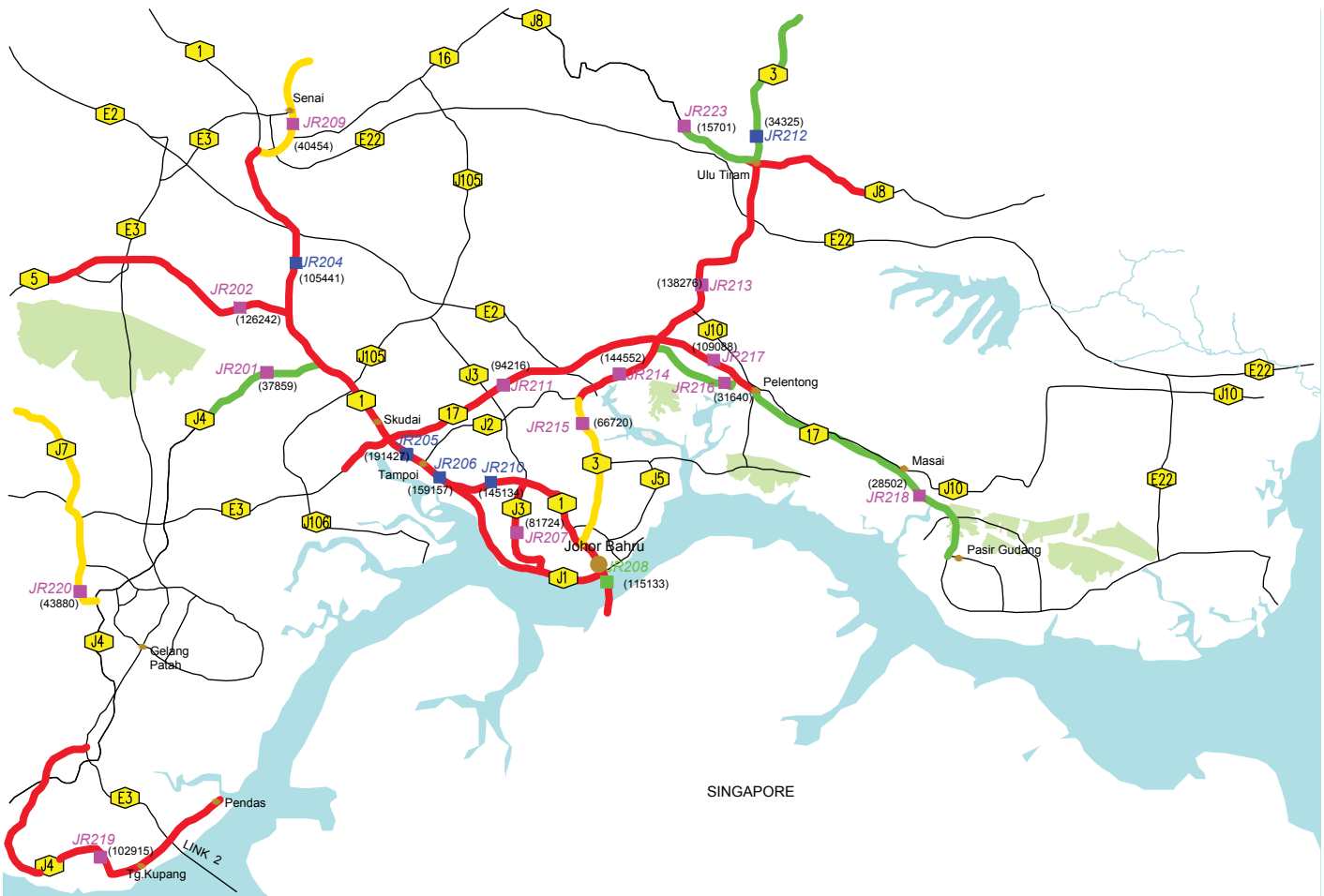
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **JOHOR**

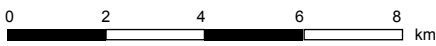


AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **JOHOR (INSET)**



LEGEND



Traffic Volume Scale

- ≥ 80,000
- 40,000 < volume < 80,000
- ≤ 40,000



Bukit Tinggi Resort

PAHANG

DARUL MAKMUR

45 Census Stations

Road Length : **19,112.79 km***

Land Area : **36,137 km²****

Population : **1,443,365 people****

*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PAHANG**

District : BENTONG

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
CR101	1	2	42.8	Kuantan-Kuala Lumpur (KL-Karak H'way)	N : 3° 21' 11.3" E : 101° 49' 34.7"	Dual	4
CR102	1	2	68.1	Kuala Lumpur - Kuantan (KL-Karak H'way)	N : 3° 28' 47.3" E : 101° 57' 16.7"	Dual	4
CR103	3	2	88.8	Jalon Karak - Sempadan Temerloh	N : 3° 28' 47.1" E : 101° 57' 16.3"	Single	2
CR104	3	68	225.4	Kuantan-Kuala Lumpur (Old Road)	N : 3° 20' 40.4" E : 101° 49' 14.3"	Single	2
CR105	3	8	204.5	Jalan Kuala Lumpur - Sempadan Kota Bharu	N : 3° 34' 52.7" E : 101° 53' 36.6"	Single	2
CR106	3	68	195.5	Jalan Kuala Lumpur - Sempadan Kota Bharu	N : 3° 29' 46.5" E : 101° 55' 32.4"	Dual	4
CR107	3	9	1.6	Jalan Karak- Sempadan Negeri Sembilan	N : 3° 24' 34.8" E : 102° 02' 27.7"	Single	2
CR108	3	8	1.0	Bentong-Raub (Old Road)	N : 3° 34' 52.0" E : 101° 53' 29.5"	Single	2

District : KUANTAN

CR401	3	12	34.0	Kuantan-Segamat	N : 3° 38' 52.2" E : 103° 07' 09.2"	Single	2
CR402	1	3	16.0	Pekan-Kuantan	N : 3° 43' 53.6" E : 103° 16' 08.7"	Dual	4
CR403	0	2	27.0	Kuantan-Maran	N : 3° 42' 29.2" E : 103° 07' 17.5"	Dual	4
CR404	3	2	8.1	Kuantan-Maran	N : 3° 46' 27.4" E : 103° 15' 53.1"	Dual	4
CR405	3	3	7.0	Kuantan Bypass (East Bound) (1km. from clover leaf junction)	N : 3° 50' 49.4" E : 103° 18' 07.5"	Dual	4
CR406	3	3	7.5	Kuantan Bypass (West Bound) (1km. from clover leaf junction)	N : 3° 48' 57.8" E : 103° 16' 29.3"	Dual	4
CR407	1	231	13.0	Kuantan-Sungai Lembing	N : 3° 51' 45.9" E : 103° 14' 59.5"	Single	2
CR408	1	231	2.0	Kuantan-Sungai Lembing	N : 3° 49' 07.6" E : 103° 18' 44.7"	Dual	4
CR409	1	2	4.8	Kuantan-Kemaman	N : 3° 50' 14.7" E : 103° 21' 09.7"	Dual	4
CR410	1	3	30.5	Kuantan - Kemaman (Sg. Ular)	N : 4° 02' 01.3" E : 103° 23' 47.5"	Single	2
CR411	3	183	8.5	Kuantan-Tanjung Lumpur-Penor	N : 3° 44' 55.0" E : 103° 18' 52.1"	Dual	4

District : KUALA LIPIS

CR501	3	64	212.5	Kuantan-Jerantut-Benta (after Kampong Tanjung Besar)	N : 4° 01' 06.4" E : 102° 02' 36.7"	Single	2
CR502	1	8	227.8	Kuantan-Jerantut-Benta-Kuala Lipis (2.4km to Kuala Lipis road)	N : 4° 10' 25.9" E : 102° 00' 57.9"	Single	2
CR503	0	8	282.0	Kuala Lumpur-Kuala Lipis-Kampong Padang Tuanku-Kota Bahru	N : 4° 14' 28.9" E : 101° 58' 57.3"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PAHANG**

District : PEKAN

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
CR601	3	12	40.0	Pekan-Batu Balik (Simpang Paloh Hinai)	N : 3° 29' 11.5" E : 103° 05' 44.5"	Single	2
CR602	3	82	5.0	Pekan-Batu Balik (Kg. Pulau Keladi)	N : 3° 31' 04.7" E : 103° 22' 34.4"	Single	2
CR603	0	3	48.0	Pekan-Nenasi (In front of JKR Pekan)	N : 3° 29' 24.4" E : 103° 25' 02.2"	Single	2

District : RAUB

CR701	1	55	230.6	Kuantan-Tranum-Gap (50m east of the junction)	N : 3° 43' 42.5" E : 101° 48' 41.9"	Single	2
CR702	3	C5	4.8	Raub-Cheroh	N : 3° 49' 25.9" E : 101° 50' 28.5"	Single	2
CR703	3	8	239.9	Kuantan-Tranum-Raub	N : 3° 46' 21.4" E : 101° 51' 11.6"	Single	2
CR704	3	8	228.6	Kuantan-Benta-Raub	N : 4° 00' 44.5" E : 101° 56' 32.9"	Single	2

District : TEMERLOH

CR801	0	2	115.0	Kuantan-Karak	N : 3° 30' 02.0" E : 102° 17' 33.6"	Single	2
CR802	3	2	219.5	Mentakab Bypass (400m. fr. first junction towards Temerloh)	N : 3° 28' 12.7" E : 102° 19' 21.5"	Single	2
CR803	3	2	130.4	Kuantan-Temerloh (500 ft from Temerloh bridge towards Maran)	N : 3° 26' 44.9" E : 102° 26' 00.1"	Dual	4
CR807	3	98	146.5	Kuantan-Temerloh-Jerantut	N : 3° 34' 31.6" E : 102° 22' 56.8"	Single	2
CR808	3	87	132.0	Kuantan-Mentakab	N : 3° 28' 25.3" E : 102° 22' 15.7"	Dual	4
CR809	3	10	126.7	Kuantan-Temerloh-Triang	N : 3° 26' 09.7" E : 102° 25' 51.5"	Single	2

District : BERA

CR810	3	10	93.0	Kuantan-Temerloh-Kemayan	N : 3° 13' 45.7" E : 102° 25' 24.3"	Single	2
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District : MARAN

CR804	3	2	80.5	Kuantan - Maran (Kg. Kemap)	N : 3° 34' 22.8" E : 102° 45' 43.2"	Single	2
CR805	1	2	70.9	Kuantan - Maran (Kg. Luit)	N : 3° 36' 02.7" E : 102° 48' 58.5"	Single	2
CR811	0	83	32.7	Kuantan - Maran - Jerantut (Kg. Awah)	N : 3° 29' 33.8" E : 102° 31' 51.2"	Single	2
CR812	3	83	39.0	Jerantut - Maran	N : 3° 46' 19.2" E : 102° 32' 30.1"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **PAHANG**

District : JERANTUT

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
CR806	3	98	1.6	Jerantut - Kampong Kerdau	N : 3° 55' 15.2" E : 102° 23' 03.1"	Single	2

District : ROMPIN

CR901	3	12	104.4	Kuantan - Segamat (400m Bkt. Ibam - Rompin junction south bound)	N : 3° 03' 34.1" E : 103° 03' 43.4"	Single	2
CR902	3	12	102.2	Kuantan - Segamat (400m Bkt. Ibam - Rompin junction north bound)	N : 3° 04' 26.7" E : 103° 04' 15.1"	Single	2
CR903	3	63	18.1	Bkt. Ibam - Rompin (400m from Kuantan - Segamat junction east bound)	N : 3° 03' 49.9" E : 103° 04' 31.2"	Single	2
CR904	3	3	146.6	Kuantan - Rompin - Endau	N : 2° 44' 03.8" E : 103° 32' 40.7"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PAHANG**

MARCH 2014

District : BENTONG

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
CR101	-	28,361	2,629	1600-1700	73.7	8.6	6.4	4.8	1.8	4.8	100.0
CR102	-	27,444	2,485	1700-1800	68.0	10.2	7.0	6.2	1.5	7.2	100.0
CR103	-	6,203	630	1900-2000	65.3	11.4	4.2	3.9	0.8	14.4	100.0
CR104	-	262	37	1700-1800	40.1	6.9	13.0	17.6	3.8	18.7	100.0
CR105	-	12,046	1,067	1500-1600	61.0	15.5	6.3	6.2	1.1	9.9	100.0
CR106	-	16,319	1,432	1700-1800	54.5	12.8	5.2	3.6	0.7	23.2	100.0
CR107	-	3,911	331	1500-1600	42.7	17.4	5.5	6.9	0.6	26.9	100.0
CR108	-	1,895	194	1300-1400	41.2	18.3	5.2	4.1	1.4	30.0	100.0

District : KUANTAN

CR401	-	6,981	593	1700-1800	49.5	16.9	13.0	12.7	1.4	6.5	100.0
CR402	-	18,215	1,771	0700-0800	72.4	9.0	5.3	3.1	1.0	9.2	100.0
CR403	36,585	32,330	3,095	1800-1900	65.6	12.2	5.9	7.9	1.5	6.9	100.0
CR404	-	68,050	7,886	1800-1900	64.8	10.0	4.9	4.0	0.6	15.7	100.0
CR405	-	65,582	6,084	1700-1800	53.9	17.4	13.1	6.5	0.3	8.7	100.0
CR406	-	66,011	5,931	1700-1800	44.6	17.9	12.8	5.3	0.5	18.9	100.0
CR407	-	33,185	3,349	0700-0800	56.7	5.4	4.9	2.8	0.8	29.4	100.0
CR408	-	36,899	2,997	1700-1800	74.0	8.8	2.0	0.4	0.7	14.1	100.0
CR409	-	45,204	3,928	0700-0800	71.6	7.2	2.6	0.9	1.3	16.4	100.0
CR410	-	22,561	2,029	1800-1900	58.1	13.5	5.5	5.1	0.6	17.2	100.0
CR411	-	19,477	2,516	0700-0800	68.5	11.1	3.0	0.9	0.4	16.2	100.0

District : KUALA LIPIS

CR501	-	1,824	162	1400-1500	42.3	14.2	9.7	5.8	0.6	27.4	100.0
CR502	-	8,043	702	1700-1800	65.8	12.7	7.5	4.9	1.5	7.6	100.0
CR503	8,975	7,654	688	1200-1300	55.8	10.9	7.2	6.2	0.8	19.2	100.0

District : PEKAN

CR601	-	3,929	473	0700-0800	56.8	8.1	7.7	3.8	1.0	22.6	100.0
CR602	-	4,692	462	0700-0800	52.4	14.1	3.7	8.5	0.3	21.1	100.0
CR603	13,567	12,025	1,304	1900-2000	55.5	11.7	6.8	3.5	0.5	22.1	100.0

District : RAUB

CR701	-	718	73	1600-1700	49.5	10.6	6.4	2.4	0.0	31.1	100.0
CR702	-	25,104	1,772	1400-1500	26.5	20.5	17.4	13.9	0.8	21.0	100.0
CR703	-	25,703	1,987	1400-1500	34.9	19.1	13.6	11.6	1.1	19.7	100.0
CR704	-	15,325	1,312	1800-1900	36.8	18.7	13.5	12.0	1.3	17.7	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PAHANG**

MARCH 2014

District : TEMERLOH

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
CR801	16,218	14,770	1,297	1700-1800	52.4	10.9	11.1	7.8	0.7	17.1	100.0
CR802	-	7,862	691	1700-1800	51.8	9.6	13.4	13.2	0.4	11.6	100.0
CR803	-	26,536	2,255	1700-1800	74.6	6.9	4.9	3.8	0.3	9.4	100.0
CR807	-	17,353	1,592	0700-0800	69.3	8.7	5.8	3.4	1.6	11.1	100.0
CR808	-	25,493	2,366	1700-1800	62.6	11.3	5.1	2.1	0.5	18.3	100.0
CR809	-	13,171	1,224	1700-1800	66.0	7.5	6.5	5.5	0.6	13.9	100.0

District : BERA

CR810	-	13,650	1,458	1800-1900	43.3	17.2	12.5	9.1	0.3	17.6	100.0
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District : MARAN

CR804	-	5,624	551	1400-1500	52.4	13.4	11.0	7.1	0.9	15.0	100.0
CR805	-	6,467	495	1500-1600	59.1	11.9	7.6	7.4	0.8	13.1	100.0
CR811	13,180	10,776	891	1700-1800	61.7	11.2	8.4	2.9	0.6	15.2	100.0
CR812	-	10,719	1,002	1800-1900	65.6	9.8	6.6	3.1	0.3	14.6	100.0

District : JERANTUT

CR806	-	14,690	1,202	0900-1000	43.6	16.1	13.6	5.0	0.8	20.8	100.0
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District : ROMPIN

CR901	-	10,005	848	1500-1600	58.1	14.5	7.3	9.8	0.8	9.4	100.0
CR902	-	9,347	859	1300-1400	50.0	18.2	12.0	9.8	0.5	9.5	100.0
CR903	-	7,334	655	1700-1800	58.2	17.0	5.9	3.2	1.2	14.5	100.0
CR904	-	7,635	673	1500-1600	53.6	14.7	10.0	5.4	0.6	15.7	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PAHANG**

SEPTEMBER 2014

District : BENTONG

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
CR101	-	35,479	3,166	1700-1800	66.2	14.9	6.6	6.1	1.7	4.5	100.0
CR102	-	29,155	2,911	1700-1800	67.4	9.4	8.4	6.5	1.3	6.9	100.0
CR103	-	6,204	548	1600-1700	46.5	10.6	13.6	12.8	0.9	15.5	100.0
CR104	-	432	48	1600-1700	46.5	6.5	15.5	5.1	1.6	24.8	100.0
CR105	-	18,290	1,762	1500-1600	62.0	13.4	8.8	4.0	1.1	10.6	100.0
CR106	-	20,656	1,633	1700-1800	59.0	12.4	6.6	3.9	0.5	17.5	100.0
CR107	-	3,321	310	1800-1900	41.3	14.7	11.7	5.8	0.9	25.5	100.0
CR108	-	2,383	151	0700-0800	40.5	18.5	8.0	6.2	1.1	25.8	100.0

District : KUANTAN

CR401	-	7,333	739	1700-1800	47.7	17.9	13.4	12.3	1.3	7.5	100.0
CR402	-	23,833	2,293	1800-1900	70.3	10.4	5.4	3.7	1.0	9.2	100.0
CR403	33,834	31,423	3,034	1700-1800	67.0	10.5	6.5	7.9	1.3	6.8	100.0
CR404	-	66,790	6,414	1700-1800	64.7	13.3	5.5	1.5	0.7	14.3	100.0
CR405	-	57,062	5,449	1700-1800	52.5	21.5	7.9	6.8	0.4	11.0	100.0
CR406	-	46,332	6,138	1700-1800	56.6	12.2	8.5	6.9	1.7	14.1	100.0
CR407	-	39,743	3,815	1700-1800	56.5	4.8	4.9	3.3	0.7	29.8	100.0
CR408	-	37,426	2,832	0700-0800	73.9	8.7	1.7	0.3	0.5	14.9	100.0
CR409	-	44,917	4,008	1600-1700	72.9	6.8	2.6	0.6	0.4	16.8	100.0
CR410	-	23,429	2,109	1800-1900	58.0	14.3	5.0	5.3	0.7	16.8	100.0
CR411	-	24,884	2,629	0700-0800	68.5	10.1	3.0	1.0	0.4	16.9	100.0

District : KUALA LIPIS

CR501	-	1,707	154	1700-1800	45.2	13.8	9.6	6.2	1.3	23.8	100.0
CR502	-	7,793	677	1700-1800	63.0	12.8	8.6	5.2	1.6	8.9	100.0
CR503	8,317	6,984	572	1700-1800	50.5	10.9	7.4	6.1	1.0	24.2	100.0

District : PEKAN

CR601	-	2,926	322	0700-0800	53.0	17.4	8.6	5.3	1.9	13.7	100.0
CR602	-	4,999	523	1300-1400	50.8	14.7	8.1	9.2	0.3	16.8	100.0
CR603	12,303	11,044	885	1700-1800	55.2	10.7	5.7	3.1	0.6	24.8	100.0

District : RAUB

CR701	-	707	69	1400-1500	46.9	11.4	5.4	2.3	0.0	33.9	100.0
CR702	-	24,977	1,735	1500-1600	24.8	20.7	17.9	14.9	0.4	21.3	100.0
CR703	-	16,603	1,574	0600-0700	50.8	13.6	11.3	7.6	1.2	15.5	100.0
CR704	-	9,050	947	0700-0800	50.1	13.3	11.3	10.4	1.7	13.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **PAHANG**

SEPTEMBER 2014

District : TEMERLOH

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
CR801	18,400	16,577	1,361	1700-1800	52.2	8.9	10.1	7.6	0.6	20.6	100.0
CR802	-	8,122	827	0700-0800	46.2	14.5	13.7	14.8	0.4	10.4	100.0
CR803	-	28,534	2,598	1700-1800	66.1	10.7	4.8	3.4	0.3	14.8	100.0
CR807	-	17,878	1,742	1700-1800	64.3	14.7	6.5	3.1	1.5	9.9	100.0
CR808	-	23,827	2,160	1700-1800	61.1	12.0	5.7	2.1	0.5	18.7	100.0
CR809	-	13,317	1,711	1800-1900	62.6	10.7	6.4	5.5	0.6	14.2	100.0

District : BERA

CR810	-	12,863	1,129	1500-1600	44.7	18.1	13.9	7.9	0.3	15.0	100.0
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District : MARAN

CR804	-	6,250	553	1500-1600	55.5	10.7	10.4	6.8	0.9	15.7	100.0
CR805	-	6,961	529	1500-1600	56.6	12.5	8.2	8.0	1.1	13.7	100.0
CR811	10,291	8,865	769	1700-1800	67.6	10.4	6.5	3.0	0.5	12.0	100.0
CR812	-	9,867	1,009	1700-1800	64.6	13.5	5.5	3.2	0.2	13.0	100.0

District : JERANTUT

CR806	-	16,740	1,431	1500-1600	39.8	21.4	11.5	5.6	0.6	21.0	100.0
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District : ROMPIN

CR901	-	9,146	718	1500-1600	57.8	15.4	7.6	7.9	0.7	10.6	100.0
CR902	-	9,281	797	1700-1800	55.0	16.6	8.3	8.7	0.7	10.8	100.0
CR903	-	8,468	769	1700-1800	59.5	16.6	5.2	2.7	0.7	15.3	100.0
CR904	-	7,981	650	1700-1800	55.2	14.4	9.0	5.7	0.5	15.2	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PAHANG**

AVERAGE 2014

District : BENTONG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
CR101	31,920	2,897	69.9	11.8	6.5	5.4	1.7	4.7	C
CR102	28,300	2,698	67.7	9.8	7.7	6.3	1.4	7.0	B
CR103	6,204	589	55.9	11.0	8.9	8.3	0.9	14.9	A
CR104	347	43	43.3	6.7	14.2	11.3	2.7	21.7	A
CR105	15,168	1,415	61.5	14.5	7.5	5.1	1.1	10.3	F
CR106	18,488	1,533	56.8	12.6	5.9	3.7	0.6	20.4	E
CR107	3,616	321	42.0	16.0	8.6	6.4	0.7	26.2	A
CR108	2,139	173	40.8	18.4	6.6	5.1	1.2	27.9	A

District : KUANTAN

CR401	7,157	666	48.6	17.4	13.2	12.5	1.3	7.0	A
CR402	21,024	2,032	71.4	9.7	5.3	3.4	1.0	9.2	A
CR403	31,876	3,065	66.3	11.4	6.2	7.9	1.4	6.9	C
CR404	67,420	7,150	64.7	11.7	5.2	2.7	0.7	15.0	F
CR405	61,322	5,767	53.2	19.5	10.5	6.6	0.3	9.9	F
CR406	56,172	6,035	50.6	15.1	10.6	6.1	1.1	16.5	F
CR407	36,464	3,582	56.6	5.1	4.9	3.1	0.8	29.6	F
CR408	37,162	2,914	73.9	8.8	1.9	0.4	0.6	14.5	A
CR409	45,060	3,968	72.2	7.0	2.6	0.7	0.8	16.6	B
CR410	22,995	2,069	58.0	13.9	5.3	5.2	0.7	17.0	F
CR411	22,181	2,573	68.5	10.6	3.0	1.0	0.4	16.6	A

District : KUALA LIPIS

CR501	1,766	158	43.7	14.0	9.7	6.0	1.0	25.6	A
CR502	7,918	690	64.4	12.8	8.0	5.0	1.6	8.2	A
CR503	7,319	630	53.1	10.9	7.3	6.2	0.9	21.7	A

District : PEKAN

CR601	3,428	398	54.9	12.8	8.2	4.6	1.4	18.1	A
CR602	4,846	493	51.6	14.4	5.9	8.9	0.3	19.0	A
CR603	11,535	1,094	55.3	11.2	6.2	3.3	0.6	23.5	B

District : RAUB

CR701	713	71	48.2	11.0	5.9	2.3	0.0	32.5	A
CR702	25,041	1,754	25.7	20.6	17.6	14.4	0.6	21.1	F
CR703	21,153	1,781	42.9	16.4	12.4	9.6	1.2	17.6	F
CR704	12,188	1,130	43.5	16.0	12.4	11.2	1.5	15.5	F

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **PAHANG**

AVERAGE 2014

District : TEMERLOH

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
CR801	15,673	1,329	52.3	9.9	10.6	7.7	0.7	18.8	F
CR802	7,992	759	49.0	12.1	13.6	14.0	0.4	11.0	C
CR803	27,535	2,427	70.4	8.8	4.8	3.6	0.3	12.1	A
CR807	17,616	1,667	66.8	11.7	6.2	3.3	1.5	10.5	F
CR808	24,660	2,263	61.8	11.6	5.4	2.1	0.5	18.5	A
CR809	13,244	1,468	64.3	9.1	6.4	5.5	0.6	14.1	E

District : BERA

CR810	13,257	1,294	44.0	17.7	13.2	8.5	0.3	16.3	F
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District : MARAN

CR804	5,937	552	53.9	12.1	10.7	7.0	0.9	15.4	A
CR805	6,714	512	57.9	12.2	7.9	7.7	1.0	13.4	A
CR811	9,820	830	64.6	10.8	7.4	2.9	0.5	13.6	A
CR812	10,293	1,006	65.1	11.7	6.0	3.1	0.3	13.8	B

District : JERANTUT

CR806	15,715	1,317	41.7	18.8	12.6	5.3	0.7	20.9	E
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District : ROMPIN

CR901	9,576	783	58.0	15.0	7.4	8.8	0.8	10.0	B
CR902	9,314	828	52.5	17.4	10.1	9.2	0.6	10.1	B
CR903	7,901	712	58.9	16.8	5.6	3.0	0.9	14.9	A
CR904	7,808	662	54.4	14.6	9.5	5.5	0.6	15.4	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PAHANG**

District : BENTONG

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
CR101	18,253	26,661	25,430	26,758	27,091	27,039	31,444	29,697	32,903	31,920	4.70	0.72
CR102	17,038	19,707	21,061	20,703	22,224	28,109	27,653	28,470	26,509	28,300	5.61	0.84
CR103	8,878	6,379	7,463	6,517	7,618	6,286	7,009	6,348	6,259	6,204	-2.50	0.42
CR104	153	155	189	162	172	205	195	321	299	347	9.33	0.82
CR105	11,050	9,774	9,293	10,624	10,992	11,627	14,439	14,057	14,381	15,168	5.21	0.79
CR106	11,909	14,333	14,002	14,712	15,237	16,000	17,574	15,490	13,768	18,488	2.89	0.48
CR107	3,030	3,391	3,212	3,245	3,688	4,144	4,152	4,228	4,439	3,616	3.46	0.61
CR108	-	1,264	1,213	1,204	1,514	1,510	1,852	1,551	1,777	2,139	6.59	0.82

District : KUANTAN

CR401	5,448	5,700	5,266	5,712	7,510	7,298	7,710	8,817	8,153	7,157	5.10	0.69
CR402	11,718	11,656	12,232	11,212	11,687	14,589	13,645	14,737	14,961	21,024	5.30	0.71
CR403	20,345	22,293	24,565	23,395	26,064	28,248	29,142	31,138	31,416	31,876	5.07	0.95
CR404	60,942	46,938	54,038	43,855	53,191	59,580	66,023	78,340	81,363	67,420	4.82	0.52
CR405	26,003	22,590	23,175	28,877	35,804	35,325	37,595	48,105	58,126	61,322	11.37	0.92
CR406	24,610	24,364	24,112	29,194	31,827	37,703	36,093	72,396	59,122	56,172	12.08	0.83
CR407	13,236	18,890	18,990	21,231	25,334	23,845	28,580	31,994	36,043	36,464	10.35	0.95
CR408	37,860	38,869	39,018	36,189	41,475	42,503	39,016	37,735	38,351	37,162	-0.10	0.00
CR409	31,543	31,179	33,371	31,550	33,672	34,986	35,911	42,538	44,054	45,060	4.41	0.86
CR410	16,470	18,840	21,337	20,260	22,249	22,079	23,278	22,911	21,601	22,995	2.86	0.64
CR411	11,398	13,005	11,313	13,854	18,450	18,150	21,213	21,479	22,434	22,181	8.65	0.88

District : KUALA LIPIS

CR501	1,246	1,536	1,573	1,867	1,806	1,632	1,646	1,537	1,760	1,766	2.12	0.30
CR502	3,083	5,724	6,399	6,342	7,103	7,093	7,617	8,108	7,608	7,918	7.40	0.62
CR503	5,726	6,134	6,427	6,609	6,159	6,253	7,053	7,513	6,985	7,319	2.49	0.74

District : PEKAN

CR601	2,550	3,097	2,962	3,711	3,059	3,660	3,298	2,857	3,403	3,428	1.80	0.22
CR602	3,533	3,520	3,816	4,359	3,644	3,843	4,088	5,517	4,608	4,846	3.90	0.62
CR603	6,450	6,513	6,902	5,746	7,738	8,650	9,761	10,319	11,563	11,535	7.86	0.86

District : RAUB

CR701	579	549	601	1,112	884	833	779	910	822	713	3.42	0.21
CR702	7,999	8,222	13,267	14,059	15,871	17,863	19,414	21,940	24,419	25,041	13.03	0.93
CR703	10,204	13,271	17,187	24,490	20,522	25,779	23,229	29,577	29,976	21,153	9.12	0.63
CR704	5,739	6,354	8,862	11,287	10,409	18,299	18,922	18,409	16,792	12,188	11.73	0.65

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **PAHANG**

District : TEMERLOH

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
CR801	13,906	11,003	12,106	11,567	11,614	11,771	11,597	13,281	13,328	15,673	1.76	0.24
CR802	10,149	6,742	6,861	6,844	7,177	7,173	7,776	8,118	8,101	7,992	0.22	0.00
CR803	26,340	25,201	26,664	27,191	32,628	32,933	33,902	31,265	31,256	27,535	2.04	0.32
CR807	7,451	6,973	7,295	8,310	8,421	10,740	10,572	10,307	18,428	17,616	10.45	0.83
CR808	24,363	24,907	25,967	26,310	28,237	27,610	27,939	28,179	23,899	24,660	0.23	0.01
CR809	10,177	12,105	11,389	11,332	11,472	14,260	14,339	14,243	13,807	13,244	3.23	0.64

District : BERA

CR810	8,064	8,047	7,674	7,434	7,109	9,721	11,348	12,300	14,429	13,257	7.58	0.76
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District : MARAN

CR804	9,591	7,936	7,866	7,647	7,350	7,516	7,487	6,885	4,837	5,937	-5.10	0.72
CR805	8,871	6,832	6,855	6,587	6,761	6,890	7,317	7,088	6,952	6,714	-1.10	0.16
CR811	7,779	7,358	7,943	8,253	8,074	8,599	9,499	9,991	10,290	9,820	3.68	0.88
CR812	-	9,209	8,486	8,447	9,950	7,902	8,761	10,837	11,550	10,293	2.90	0.38

District : JERANTUT

CR806	13,706	13,810	11,780	14,799	18,831	26,852	26,461	20,879	20,530	15,715	5.43	0.33
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District : ROMPIN

CR901	6,293	6,291	7,466	6,761	14,792	8,916	8,855	9,085	9,641	9,576	4.88	0.33
CR902	6,828	6,634	6,721	7,316	11,634	8,102	8,427	9,545	8,763	9,314	3.98	0.44
CR903	4,769	4,587	4,879	2,857	5,948	6,303	6,672	7,673	7,089	7,901	7.55	0.55
CR904	5,303	5,364	5,509	5,760	6,220	6,886	7,129	7,517	7,241	7,808	4.77	0.95

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

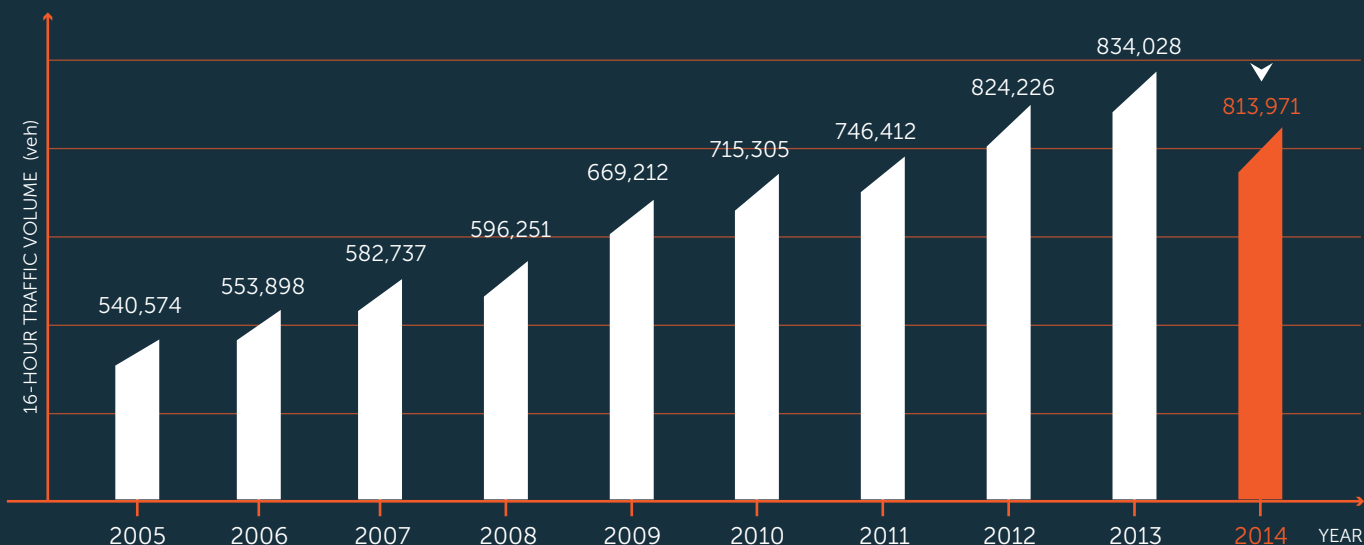


Figure 3.10-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Pahang



There are 45 census stations in Pahang. The 16-hour traffic volume documented since year 2005 to 2014 shows increase of 273,397 vehicles in Pahang. Pattern has seen a constant positive growth throughout the 10-year span. However there was a decrease in year 2014 by 2.40% equivalent to 20,057 vehicles.

-2.40%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

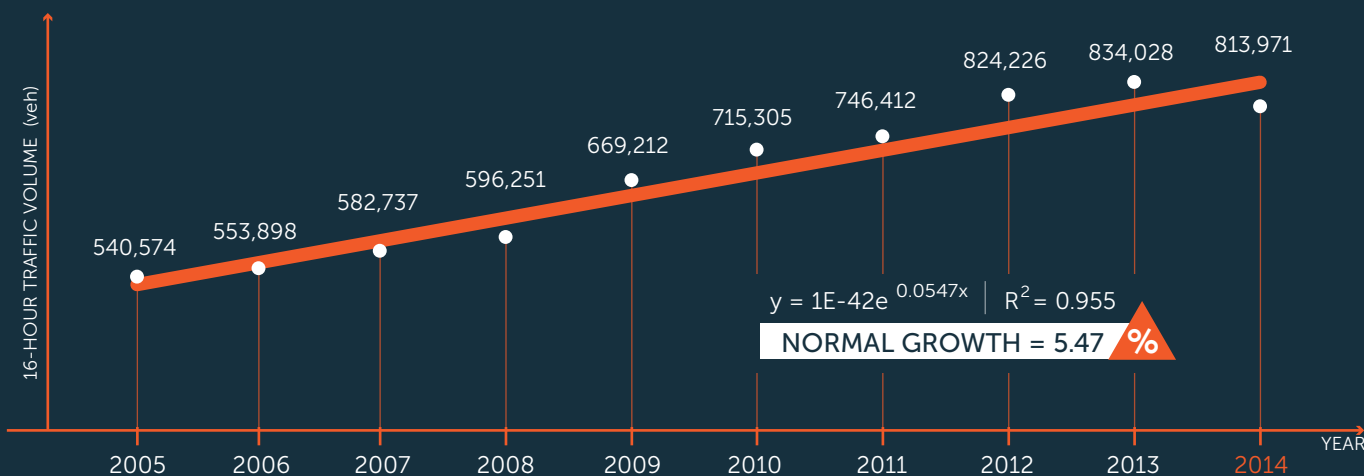
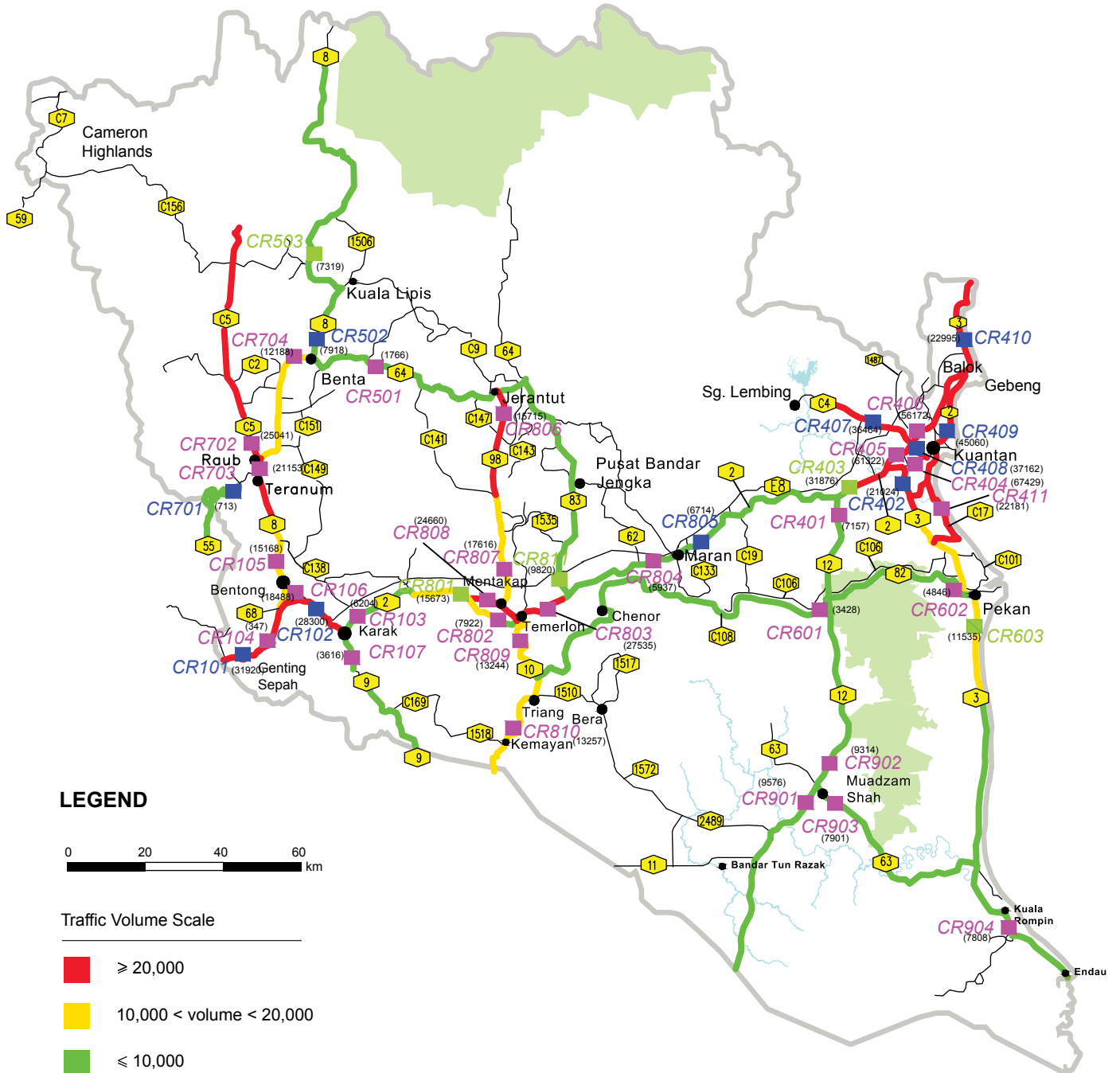


Figure 3.10-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Pahang

Traffic growth rate recorded for the state of Pahang is 5.47% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Pahang.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **PAHANG**







Crystal Mosque, Kuala Terengganu

TERENGGANU

DARUL IMAN

29 Census Stations

Road Length : 8,950.99 km*

Land Area : 13,035 km²**

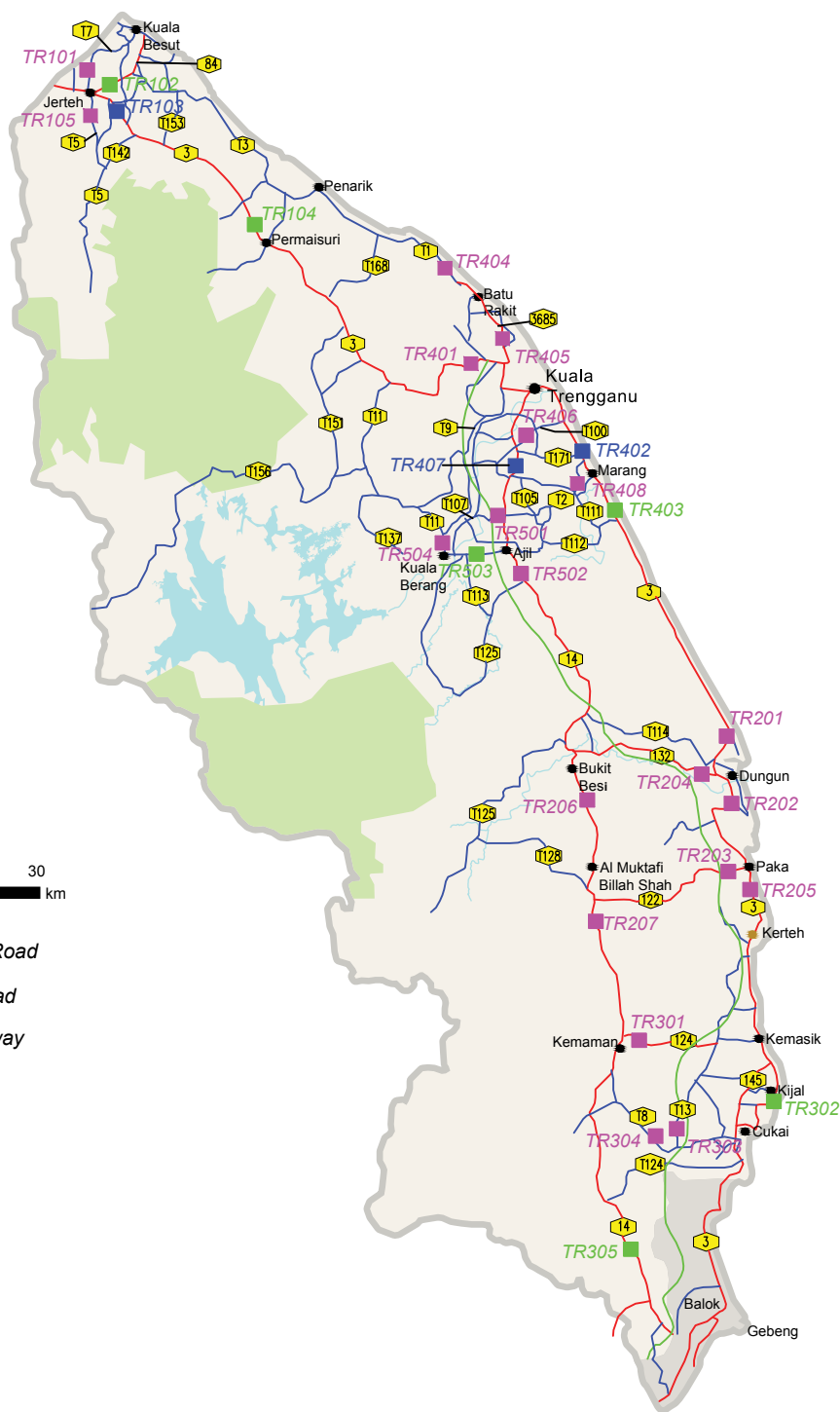
Population : 1,015,776 people**

*Source : Road Facilities Maintenance Division, JKR Malaysia

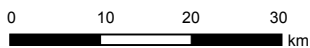
**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **TERENGGANU**

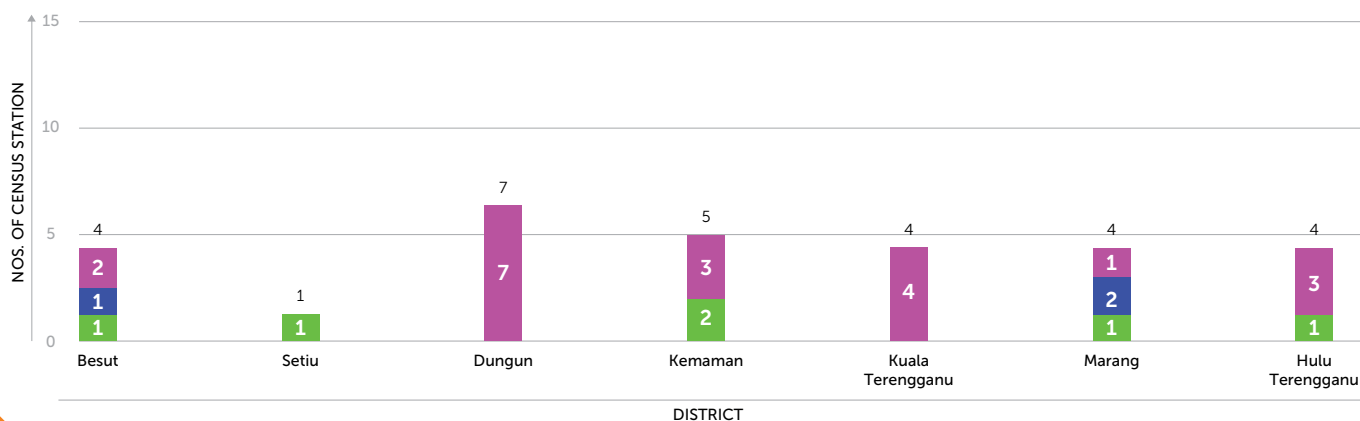


LEGEND



- Federal Road
- State Road
- Expressway
- Type 0
- Type 1
- Type 3

DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **TERENGGANU**

District : BESUT

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
TR101	3	189	3.0	Jerteh - Kuala Besut	N : 5° 46' 02.1" E : 102° 29' 21.3"	Single	2
TR102	0	84	4.0	Jerteh - Kuala Besut (Kg. Raja)	N : 5° 45' 29.1" E : 102° 31' 53.6"	Single	2
TR103	1	3	62.0	Kuala Terengganu - Jerteh - Kota Bharu	N : 5° 43' 32.9" E : 102° 31' 26.3"	Single	2
TR105	3	T5	1.6	Jerteh - Keruak	N : 5° 43' 35.0" E : 102° 29' 29.5"	Single	2

District : SETIU

TR104	0	3	70.8	Kuala Terengganu - Kota Bharu (Bandar Permaisuri)	N : 5° 31' 44.2" E : 102° 44' 22.3"	Single	2
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District : DUNGUN

TR201	3	3	67.2	Kuala Terengganu - Dungun (Kg. Kuala Abang)	N : 4° 49' 40.0" E : 103° 24' 58.8"	Single	2
TR202	3	3	80.2	Kuala Terengganu - Dungun - Kemaman (Kuala Dungun - Paka)	N : 4° 42' 44.2" E : 103° 24' 35.2"	Dual	4
TR203	3	122	5.6	Paka - Rasau	N : 4° 37' 25.9" E : 103° 25' 41.7"	Dual	4
TR204	3	132	4.1	Kuala Dungun - Jambatan Jerangau (Kg. Che Lijah)	N : 4° 45' 38.8" E : 103° 23' 08.5"	Single	2
TR205	3	3	102.2	Paka - Kerteh (Hadapan YTL)	N : 4° 36' 10.0" E : 103° 26' 36.0"	Dual	4
TR206	3	14	79.3	Lebuhraya Jerangau - Jabor (Bukit Besi (Besol))	N : 4° 44' 47.1" E : 103° 11' 49.9"	Single	2
TR207	3	14	111.2	Jalan Jerangau - Jabor (Kuari Pondok Limau)	N : 4° 29' 51.3" E : 103° 14' 03.4"	Single	2

District : KEMAMAN

TR301	3	124	1.0	Kemasik - Sri Bandi (Jerangau - Jabor Junction)	N : 4° 22' 15.3" E : 103° 18' 04.2"	Single	2
TR302	0	3	126.0	Kuala Terengganu - Kemaman - Kuantan	N : 4° 23' 44.9" E : 103° 26' 53.9"	Single	2
TR303	3	T13	7.0	Chukai - Paman	N : 4° 13' 26.3" E : 103° 20' 22.3"	Single	2
TR304	3	237	7.0	Air Putih - Paman	N : 4° 13' 23.9" E : 103° 20' 21.3"	Single	2
TR305	0	14	48.0	Cheneh - Kuala Terengganu (Jalan Jabor - Jerangau)	N : 4° 7' 56.1" E : 103° 15' 17.2"	Single	2

District : KUALA TERENGGANU

TR401	3	3	16.8	Kuala Terengganu - Jerteh (Tepoh)	N : 5° 21' 20.1" E : 103° 3' 40.9"	Dual	4
TR404	3	3685	33.1	Kuala Terengganu - Kg. Merang (Meng. Panjang - Bt. Rakit)	N : 5° 28' 57.7" E : 103° 0' 32.3"	Single	2
TR405	3	3685	15.2	Gong Badak - Kuala Terengganu	N : 5° 21' 54.1" E : 103° 5' 23.8"	Dual	4
TR406	3	T100	15.5	Kuala Terengganu - Chedering (Surau Panjang)	N : 5° 15' 12.1" E : 103° 8' 59.7"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **TERENGGANU**

District : MARANG

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
TR402	1	3	17.0	Kuala Terengganu - Marang	N : 5° 12' 38.3" E : 103° 12' 11.8"	Dual	4
TR403	0	3	26.0	Kuala Terengganu - Marang	N : 5° 08' 26.7" E : 103° 14' 30.3"	Single	2
TR407	1	14	17.0	Kuala Terengganu - Kuala Berang	N : 5° 11' 52.5" E : 103° 06' 05.6"	Dual	4
TR408	3	T2	1.6	Marang - Wakaf Tapai	N : 5° 11' 50.6" E : 103° 11' 36.6"	Single	2

District : HULU TERENGGANU

TR501	3	T107	11.0	Kuala Berang - Tanggol - Wakaf Tapai	N : 5° 07' 30.6" E : 103° 03' 42.0"	Single	2
TR502	3	14	146.0	Kuala Terengganu - Ajil - Jerangau	N : 5° 02' 23.2" E : 103° 06' 38.0"	Single	2
TR503	0	106	5.0	Kuala Terengganu - Ajil - Kuala Berang	N : 5° 04' 21.4" E : 103° 02' 50.3"	Dual	4
TR504	3	247	1.0	Kuala Terengganu - Kuala Berang - Kg. Kuala Peng (Sg. Tong Setiu)	N : 5° 05' 07.3" E : 102° 59' 52.5"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **TERENGGANU**

MARCH 2014

District : BESUT

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
TR101	-	11,591	1,004	1500-1600	56.8	11.0	4.4	1.6	0.5	25.7	100.0
TR102	16,844	15,223	1,223	1700-1800	75.5	5.8	2.4	1.0	0.4	14.9	100.0
TR103	-	18,746	1,584	1700-1800	66.2	9.2	3.5	3.0	0.7	17.4	100.0
TR105	-	14,846	1,579	0700-0800	59.7	12.3	2.7	0.9	0.3	24.0	100.0

District : SETIU

TR104	17,547	16,017	1,523	0700-0800	61.1	15.8	5.1	3.3	0.8	13.9	100.0
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District : DUNGUN

TR201	-	10,318	800	1600-1700	60.6	13.0	6.9	3.8	1.4	14.3	100.0
TR202	-	28,062	2,935	0700-0800	52.5	13.1	6.3	2.5	0.6	25.0	100.0
TR203	-	12,835	1,450	0700-0800	41.1	12.7	6.7	4.5	0.2	34.9	100.0
TR204	-	9,959	1,168	0700-0800	52.5	12.7	8.1	1.1	0.1	25.5	100.0
TR205	-	37,615	4,997	1700-1800	56.1	9.6	4.6	1.8	0.4	27.5	100.0
TR206	-	6,331	500	0700-0800	44.9	13.3	11.9	17.5	0.4	11.9	100.0
TR207	-	13,852	1,308	0700-0800	32.7	21.1	22.3	21.7	0.1	2.1	100.0

District : KEMAMAN

TR301	-	2,206	195	1800-1900	51.6	10.6	6.8	5.3	0.3	25.4	100.0
TR302	22,206	19,774	2,012	1700-1800	71.8	8.8	4.1	4.2	0.7	10.4	100.0
TR303	-	2,409	249	0700-0800	56.7	8.9	4.7	2.0	0.0	27.7	100.0
TR304	-	2,670	344	1800-1900	48.3	12.5	4.9	3.0	0.1	31.2	100.0
TR305	9,231	8,128	669	1600-1700	52.1	15.7	10.3	11.2	0.8	9.9	100.0

District : KUALA TERENGGANU

TR401	-	23,245	2,020	0700-0800	52.9	13.4	9.6	1.8	0.5	21.8	100.0
TR404	-	13,692	1,224	1700-1800	50.1	17.6	10.7	3.6	1.2	16.9	100.0
TR405	-	52,826	5,520	0700-0800	69.1	7.3	5.0	0.6	0.4	17.5	100.0
TR406	-	21,705	2,172	0700-0800	54.0	5.2	6.5	0.7	0.1	33.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **TERENGGANU**

MARCH 2014

District : MARANG

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
TR402	-	32,221	3,074	1700-1800	68.7	6.0	2.8	0.8	0.7	20.9	100.0
TR403	15,965	14,024	1,278	1600-1700	71.4	7.3	4.3	1.5	1.5	14.0	100.0
TR407	-	19,355	1,878	0700-0800	68.0	6.2	4.4	1.3	0.5	19.6	100.0
TR408	-	9,122	1,189	0700-0800	59.6	5.0	2.7	0.3	0.3	32.1	100.0

District : HULU TERENGGANU

TR501	-	2,792	300	0700-0800	45.2	8.1	6.4	4.1	0.2	36.0	100.0
TR502	-	8,813	902	1700-1800	60.8	4.3	5.8	3.6	0.6	24.9	100.0
TR503	16,826	14,955	1,338	1700-1800	68.0	10.3	3.5	2.0	0.6	15.6	100.0
TR504	-	7,663	790	1800-1900	60.5	8.2	5.6	2.7	0.7	22.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **TERENGGANU**

SEPTEMBER 2014

District : BESUT

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
TR101	-	20,703	2,046	1600-1700	59.9	11.7	3.3	1.0	0.3	23.8	100.0
TR102	15,745	14,257	1,183	0700-0800	74.0	6.6	2.8	1.2	0.5	14.9	100.0
TR103	-	20,233	1,488	1700-1800	67.2	9.8	3.2	2.7	0.8	16.2	100.0
TR105	-	13,840	1,529	1500-1600	56.8	11.1	6.9	2.1	0.3	22.9	100.0

District : SETIU

TR104	17,207	15,596	1,318	0700-0800	59.3	16.2	6.2	3.4	0.8	14.1	100.0
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District : DUNGUN

TR201	-	7,696	620	1700-1800	63.6	9.4	6.3	2.4	1.9	16.4	100.0
TR202	-	28,185	3,266	0700-0800	58.0	8.6	4.7	1.5	0.7	26.6	100.0
TR203	-	12,805	1,333	0900-1000	45.6	10.1	7.2	3.5	0.2	33.5	100.0
TR204	-	10,095	981	0700-0800	51.6	14.2	8.5	0.9	0.1	24.7	100.0
TR205	-	31,286	4,779	0700-0800	54.4	11.5	4.8	2.3	0.5	26.4	100.0
TR206	-	4,695	438	1700-1800	56.6	12.1	10.2	13.4	0.5	7.3	100.0
TR207	-	5,278	446	1800-1900	55.8	16.5	11.0	15.2	0.6	1.0	100.0

District : KEMAMAN

TR301	-	2,140	202	1700-1800	55.1	9.1	7.1	5.0	0.5	23.1	100.0
TR302	21,657	18,823	1,705	1700-1800	71.5	9.0	5.0	3.3	0.7	10.4	100.0
TR303	-	1,014	139	0700-0800	34.9	16.1	3.9	1.5	0.0	43.6	100.0
TR304	-	4,177	492	0700-0800	47.9	14.8	5.4	2.3	0.0	29.6	100.0
TR305	8,640	7,206	605	1800-1900	60.8	11.8	8.5	8.5	0.9	9.6	100.0

District : KUALA TERENGGANU

TR401	-	21,867	2,110	0700-0800	54.1	12.3	9.1	2.7	0.7	21.1	100.0
TR404	-	13,642	1,192	1100-1200	51.7	16.7	8.9	1.6	0.7	20.3	100.0
TR405	-	49,073	4,933	1700-1800	65.6	7.8	4.8	0.8	0.4	20.6	100.0
TR406	-	21,533	2,438	0700-0800	53.5	6.1	7.6	0.8	0.2	31.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **TERENGGANU**

SEPTEMBER 2014

District : MARANG

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
TR402	-	31,150	4,118	1700-1800	69.6	6.1	2.8	0.9	0.9	19.7	100.0
TR403	18,288	16,418	3,669	1000-1100	76.1	4.8	2.8	1.5	3.0	11.8	100.0
TR407	-	19,093	1,815	0700-0800	67.4	6.6	4.4	1.2	1.0	19.4	100.0
TR408	-	8,634	1,363	0700-0800	58.3	5.7	2.0	0.3	0.3	33.5	100.0

District : HULU TERENGGANU

TR501	-	2,611	270	0700-0800	48.0	7.5	7.4	2.7	0.0	34.4	100.0
TR502	-	8,665	1,071	0700-0800	57.3	9.8	5.2	3.6	0.5	23.6	100.0
TR503	17,709	15,937	1,604	0700-0800	68.5	10.5	3.2	2.1	0.6	15.0	100.0
TR504	-	6,879	663	1700-1800	56.7	12.5	4.5	2.5	0.6	23.2	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **TERENGGANU**

AVERAGE 2014

District : BESUT

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
TR101	16,147	1,525	58.4	11.3	3.8	1.3	0.4	24.7	D
TR102	14,740	1,203	74.7	6.2	2.6	1.1	0.5	14.9	B
TR103	19,490	1,536	66.7	9.5	3.4	2.8	0.8	16.8	D
TR105	14,343	1,554	58.2	11.7	4.8	1.5	0.3	23.5	E

District : SETIU

TR104	15,806	1,420	60.2	16.0	5.7	3.3	0.8	14.0	E
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District : DUNGUN

TR201	9,007	710	62.1	11.2	6.6	3.1	1.6	15.4	A
TR202	28,124	3,101	55.2	10.8	5.5	2.0	0.7	25.8	A
TR203	12,820	1,392	43.3	11.4	7.0	4.0	0.2	34.2	A
TR204	10,027	1,075	52.0	13.5	8.3	1.0	0.1	25.1	B
TR205	34,451	4,888	55.3	10.5	4.7	2.1	0.4	27.0	E
TR206	5,513	469	50.7	12.7	11.0	15.5	0.4	9.6	A
TR207	9,565	877	44.2	18.8	16.7	18.4	0.4	1.6	E

District : KEMAMAN

TR301	2,173	199	53.4	9.9	7.0	5.2	0.4	24.2	A
TR302	19,298	1,859	71.7	8.9	4.6	3.7	0.7	10.4	F
TR303	1,712	194	45.8	12.5	4.3	1.7	0.0	35.6	A
TR304	3,424	418	48.1	13.7	5.1	2.7	0.1	30.4	A
TR305	7,667	637	56.5	13.7	9.4	9.9	0.8	9.7	A

District : KUALA TERENGGANU

TR401	22,556	2,065	53.5	12.8	9.4	2.3	0.6	21.5	A
TR404	13,667	1,208	50.9	17.1	9.8	2.6	1.0	18.6	D
TR405	50,950	5,227	67.4	7.5	4.9	0.7	0.4	19.1	F
TR406	21,619	2,305	53.8	5.6	7.0	0.7	0.1	32.7	F

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **TERENGGANU**

AVERAGE 2014

District : MARANG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
TR402	31,686	3,596	69.2	6.0	2.8	0.9	0.8	20.3	B
TR403	15,221	2,473	73.7	6.1	3.6	1.5	2.2	12.9	F
TR407	19,224	1,846	67.7	6.4	4.4	1.2	0.8	19.5	A
TR408	8,878	1,276	58.9	5.3	2.3	0.3	0.3	32.8	B

District : HULU TERENGGANU

TR501	2,702	285	46.6	7.8	6.9	3.4	0.1	35.2	A
TR502	8,739	987	59.0	7.1	5.5	3.6	0.5	24.2	B
TR503	15,446	1,471	68.3	10.4	3.3	2.0	0.6	15.3	A
TR504	7,271	727	58.6	10.4	5.1	2.6	0.6	22.8	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **TERENGGANU**

District : BESUT

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
TR101	6,559	8,080	8,483	11,724	13,870	11,217	12,422	14,611	18,010	16,147	9.94	0.86
TR102	16,895	17,300	15,897	16,395	17,325	18,550	16,663	17,695	16,086	14,740	-0.70	0.10
TR103	18,805	19,007	18,384	23,357	21,313	24,196	25,551	27,325	27,066	19,490	3.14	0.37
TR105	8,544	10,392	10,134	12,420	9,424	11,199	12,827	12,895	13,896	14,343	4.95	0.75

District : SETIU

TR104	10,945	11,491	11,942	12,572	12,088	14,188	14,451	14,882	14,693	15,806	4.06	0.93
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District : DUNGUN

TR201	19,924	9,105	8,248	7,813	10,652	10,440	13,386	8,929	9,821	9,007	-2.80	0.09
TR202	11,688	20,955	25,215	23,463	29,051	28,602	30,035	27,856	29,864	28,124	7.03	0.55
TR203	11,383	11,810	14,803	13,581	12,412	11,028	13,605	14,453	13,818	12,820	1.17	0.12
TR204	14,070	8,301	5,986	6,534	8,017	8,300	10,791	8,393	9,284	10,027	0.58	0.01
TR205	15,923	24,677	21,107	20,500	29,995	29,818	33,471	26,867	37,896	34,451	7.65	0.73
TR206	15,565	12,752	4,884	5,937	6,623	6,350	6,945	5,952	5,896	5,513	-8.10	0.42
TR207	11,112	13,439	24,207	23,204	25,151	22,096	22,898	25,761	24,011	9,565	1.73	0.02

District : KEMAMAN

TR301	761	1,552	1,645	1,744	1,660	1,649	1,655	2,090	2,091	2,173	7.62	0.60
TR302	13,754	14,475	14,899	15,228	15,417	16,831	17,498	18,418	19,086	19,298	3.97	0.98
TR303	863	810	923	901	1,211	881	2,156	988	1,452	1,712	7.81	0.50
TR304	2,119	3,471	2,547	1,353	2,441	4,400	2,424	3,337	3,434	3,424	4.81	0.19
TR305	4,033	4,079	5,116	5,363	5,381	5,590	6,553	7,566	8,036	7,667	7.95	0.94

District : KUALA TERENGGANU

TR401	20,016	22,845	20,791	21,153	20,282	23,673	22,183	22,263	22,722	22,556	1.02	0.30
TR404	7,424	8,279	8,654	9,104	9,474	14,219	11,812	12,679	15,597	13,667	7.89	0.85
TR405	22,990	42,155	60,257	63,719	61,587	51,546	44,675	47,067	56,821	50,950	4.11	0.18
TR406	12,101	14,248	14,061	14,275	15,256	16,727	18,504	18,465	20,190	21,619	6.00	0.96

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **TERENGGANU**

District : **MARANG**

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
TR402	11,594	24,524	39,230	24,933	24,852	25,887	27,451	29,532	31,227	31,686	5.85	0.31
TR403	10,756	11,607	12,429	13,347	13,288	14,409	15,103	14,435	13,712	15,221	3.33	0.78
TR407	20,304	17,171	17,217	18,263	17,214	17,751	17,384	17,360	19,041	19,224	0.09	0.00
TR408	7,142	9,121	11,369	6,022	11,275	13,517	12,868	12,211	11,737	8,878	3.96	0.20

District : **HULU TERENGGANU**

TR501	3,039	2,508	2,446	2,750	2,918	3,050	2,840	2,956	2,894	2,702	0.63	0.06
TR502	11,149	12,216	10,838	13,132	14,701	14,695	12,649	10,092	8,715	8,739	-3.00	0.24
TR503	15,346	13,215	13,235	14,758	15,301	18,188	19,064	17,140	15,461	15,446	2.06	0.27
TR504	11,073	9,994	12,209	11,654	12,765	12,280	12,314	10,426	8,723	7,271	-3.30	0.30

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

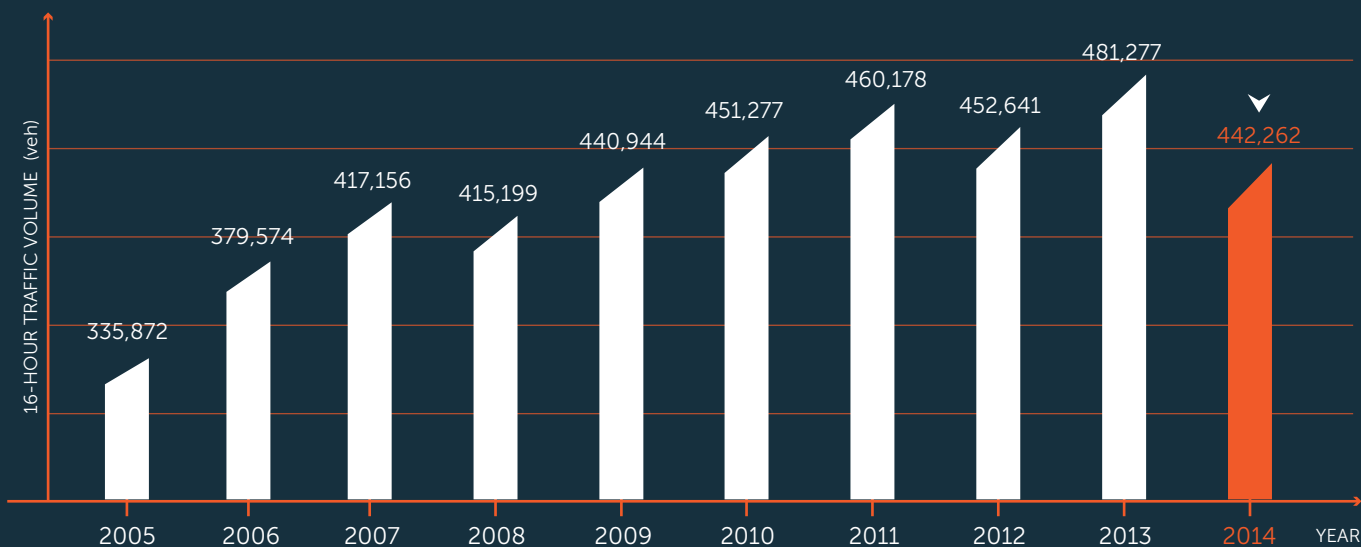


Figure 3.11-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Terengganu



There are 29 census stations in Terengganu. Over the 10 years span, traffic growth rate has been positive, and 2013 shows the highest number of vehicles on the road. The 16-hour traffic volume documented since year 2005 to 2014 shows slight interval decrease of traffic volume in 2008, 2012 and 2014. In the year 2014, the amount has decreased 8.11% compared to year 2013 which is equivalent to 39,015 vehicles.

-8.11%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

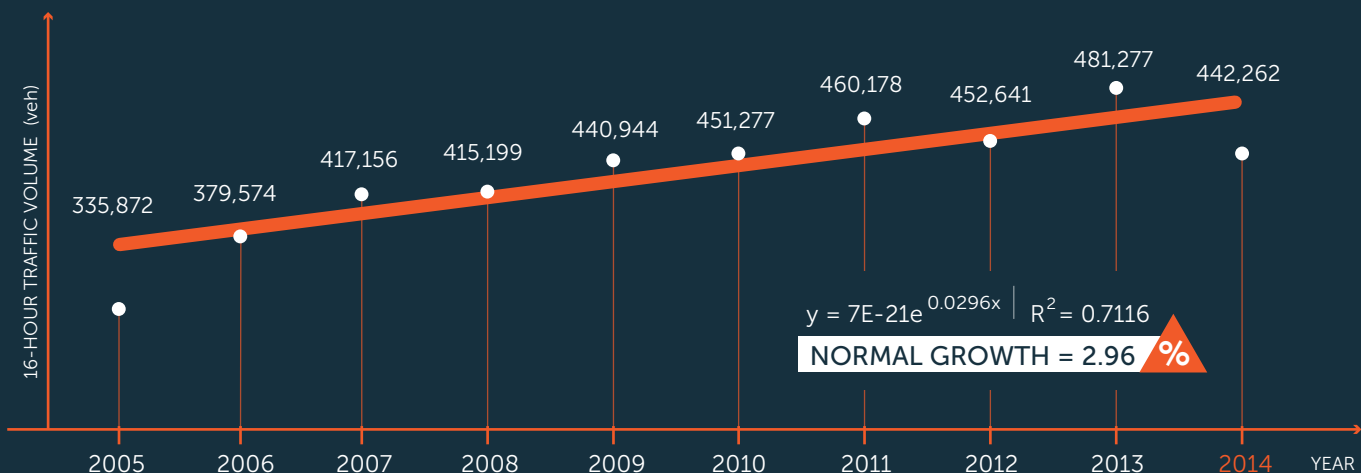
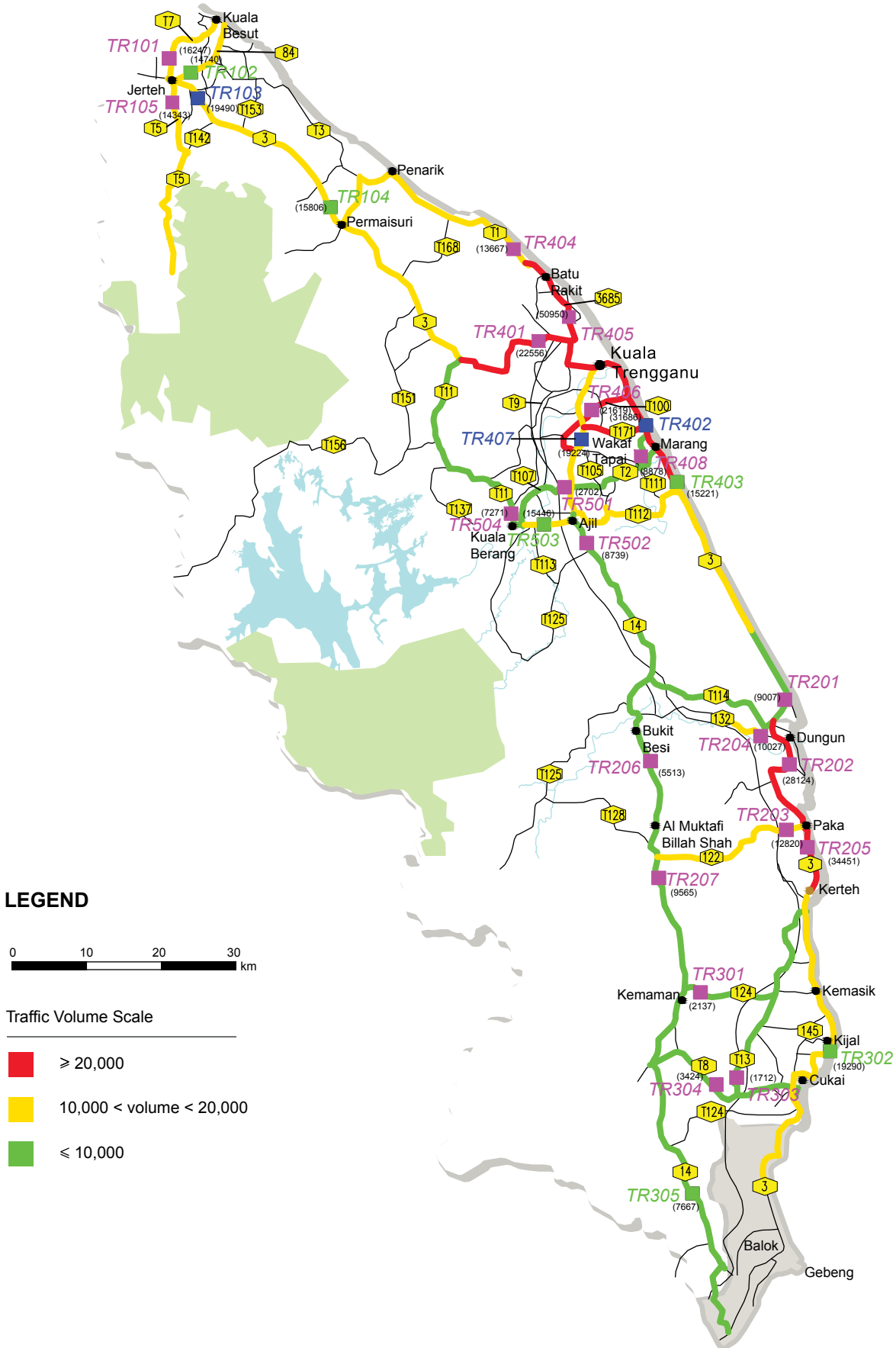


Figure 3.11-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Terengganu

Traffic growth rate recorded for the state of Terengganu is 2.96% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Terengganu.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **TERENGGANU**





Kota Sultan Ismail Petra, Kota Bharu

KELANTAN

DARUL NAIM

32 Census Stations

Road Length : **20,617.29 km***

Land Area : **15,099 km²****

Population : **1,459,994 people****

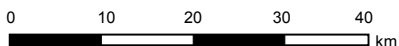
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

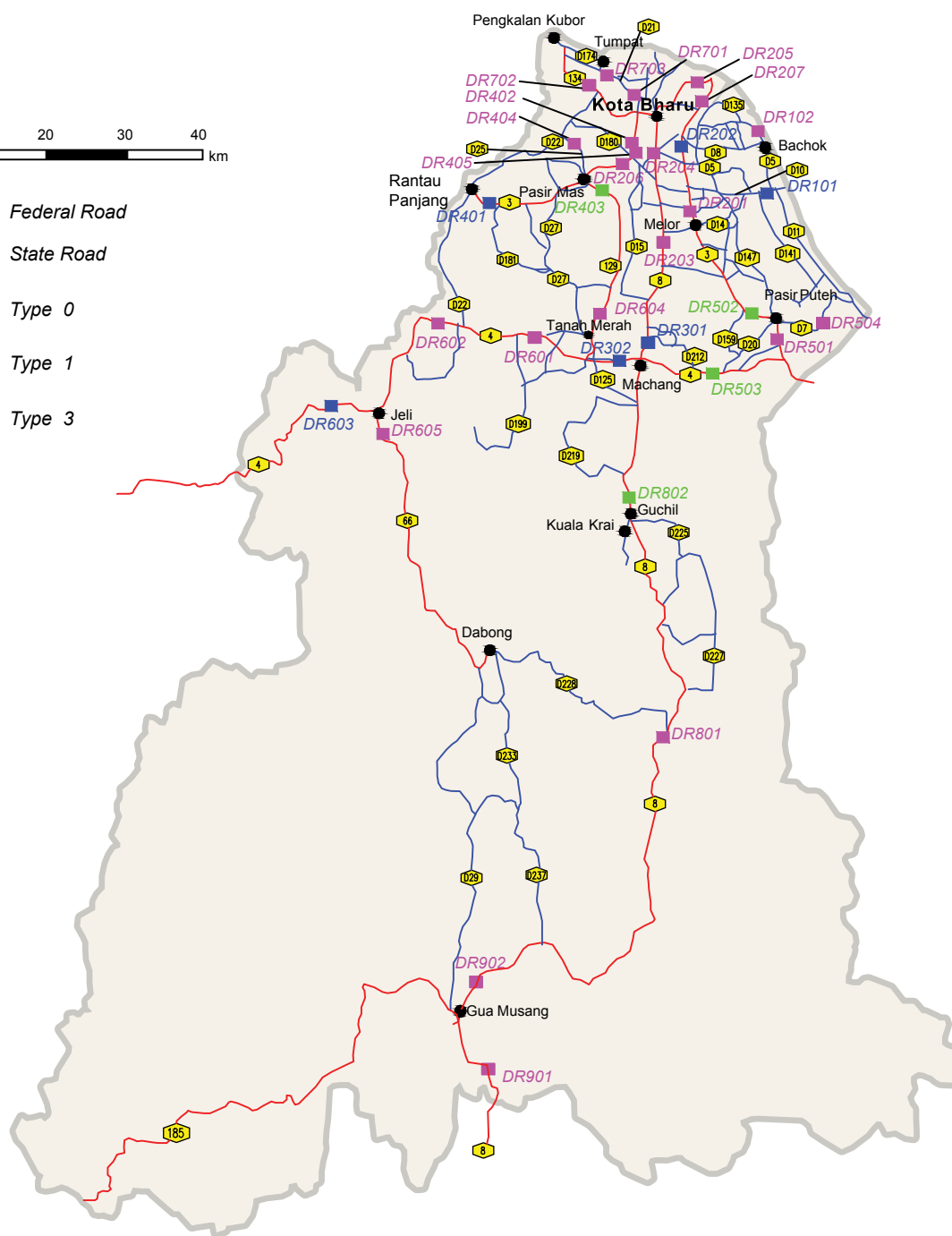
TRAFFIC CENSUS STATION MAP

STATE : **KELANTAN**

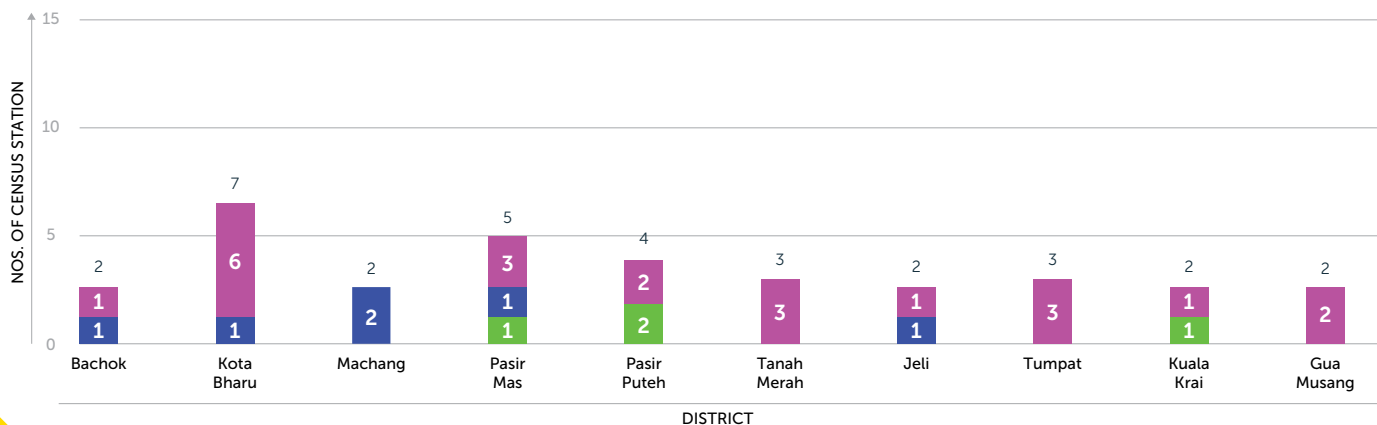
LEGEND



- Federal Road
- State Road
- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **KELANTAN**

District : BACHOK

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
DR101	1	D10	28.2	Kota Bharu - Peringat - Gunong - Bachok	N : 6° 00' 44.2" E : 102° 22' 50.0"	Single	2
DR102	3	211	18.7	Kota Bharu - Pengkalan Baru - Bachok	N : 6° 04' 20.8" E : 102° 21' 43.5"	Single	2

District : KOTA BHARU

DR201	3	3	19.3	Kota Bharu - Pasir Puteh	N : 5° 58' 02.3" E : 102° 17' 43.2"	Dual	4
DR202	1	3	6.4	Kota Bharu - Pasir Puteh	N : 6° 05' 08.6" E : 102° 16' 37.2"	Dual	4
DR203	3	8	20.9	Kota Bharu - Machang	N : 6° 56' 13.7" E : 102° 14' 46.8"	Single	2
DR204	3	8	8.1	Kota Bharu - Machang	N : 6° 03' 00.6" E : 102° 14' 17.3"	Single	2
DR205	3	57	4.0	Kota Bharu - Pengkalan Chepa	N : 6° 08' 05.8" E : 102° 15' 46.6"	Dual	4
DR206	3	130	9.5	Wakaf Che Yeh - Salor - Pasir Mas	N : 6° 02' 53.3" E : 102° 12' 49.4"	Single	2
DR207	3	131	4.0	Kubang Krian - Sabak	N : 6° 07' 19.4" E : 102° 17' 42.5"	Single	2

District : MACHANG

DR301	1	8	35.5	Kota Bharu - Machang	N : 5° 48' 45.5" E : 102° 13' 29.9"	Dual	4
DR302	1	4	47.2	Kota Bharu - Machang - Tanah Merah - Jeli	N : 5° 46' 21.7" E : 102° 09' 47.5"	Single	2

District : PASIR MAS

DR401	1	3	6.5	Pasir Mas - Rantau Panjang	N : 6° 01' 03.1" E : 102° 06' 23.4"	Single	2
DR402	3	3	6.5	Pasir Mas - Kota Bahru (Kg. Tar Tujuh)	N : 6° 03' 24.3" E : 102° 11' 51.8"	Single	2
DR403	0	129	1.0	Pasir Mas - Tanah Merah (Kg. Lemal)	N : 6° 01' 24.2" E : 102° 08' 52.9"	Single	2
DR404	3	D25	1.3	Pasir Mas - Meranti	N : 6° 03' 21.4" E : 102° 08' 19.1"	Single	2
DR405	3	208	7.2	Tendong - Pendek (Jambatan Sultan Ismail)	N : 6° 03' 49.2" E : 102° 12' 19.6"	Single	2

District : PASIR PUTEH

DR501	3	3	44.0	Kota Bharu - Pasir Puteh - Batu Melintang	N : 5° 48' 43.6" E : 102° 24' 45.5"	Single	2
DR502	0	3	34.1	Kota Bharu - Kuala Terengganu	N : 5° 51' 06.8" E : 102° 21' 26.0"	Single	2
DR503	0	4	19.5	Lebuhraya Pasir Puteh - Machang - Jeli	N : 5° 45' 31.2" E : 102° 19' 41.5"	Single	2
DR504	3	D7	41.0	Kota Bharu - Pasir Puteh - Kuala Semerak	N : 5° 49' 56.8" E : 102° 24' 47.3"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **KELANTAN**

District : TANAH MERAH

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
DR601	3	4	56.2	Kota Bharu - Tanah Merah - Batu Melintang	N : 5° 48' 30.0" E : 102° 04' 55.2"	Single	2
DR602	3	4	76.4	Kota Bharu - Tanah Merah	N : 5° 49' 46.4" E : 101° 55' 54.3"	Single	2
DR604	3	129	27.0	Kota Bharu - Pasir Mas - Tanah Merah	N : 5° 50' 05.3" E : 102° 09' 22.7"	Single	2

District : JELI

DR603	1	4	6.1	Lebuh raya Timur - Barat	N : 5° 42' 50.5" E : 101° 47' 24.4"	Single	2
DR605	3	66	6.0	Jeli - Dabong	N : 5° 40' 46.8" E : 101° 51' 03.7"	Single	2

District : TUMPAT

DR701	3	D21	9.5	Kota Bharu - Tumpat / Palekbang	N : 6° 08' 05.0" E : 102° 12' 58.6"	Single	2
DR702	3	134	16.6	Kota Bharu - Pengkalan Kubor	N : 6° 10' 23.8" E : 102° 07' 42.3"	Single	2
DR703	3	D21	6.4	Chabang Tiga - Tumpat	N : 6° 10' 27.8" E : 102° 13' 33.4"	Single	2

District : KUALA KRAI

DR801	3	8	102.6	Kota Bharu - Gua Musang	N : 5° 19' 05.1" E : 102° 16' 46.7"	Single	2
DR802	0	8	61.5	Kota Bharu - Kuala Krai	N : 5° 36' 04.6" E : 102° 11' 31.9"	Single	2

District : GUA MUSANG

DR901	3	8	10.0	Gua Musang - Merapoh	N : 4° 48' 52.0" E : 101° 57' 53.5"	Single	2
DR902	3	8	10.0	Gua Musang - Renok - Kuala Krai	N : 4° 54' 46.6" E : 101° 59' 35.8"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KELANTAN**

MARCH 2014

District : BACHOK

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
DR101	-	24,947	2,150	1700-1800	47.8	12.8	7.6	0.6	0.4	30.7	100.0
DR102	-	22,531	2,103	0900-1000	46.1	10.1	6.7	1.1	0.6	35.4	100.0

District : KOTA BHARU

DR201	-	22,451	2,163	0700-0800	60.4	6.3	5.9	1.4	0.8	25.2	100.0
DR202	-	45,914	3,958	0700-0800	73.2	3.1	1.5	0.3	0.4	21.6	100.0
DR203	-	26,160	2,957	0800-0900	63.6	7.4	4.7	1.5	0.8	22.0	100.0
DR204	-	37,568	3,983	1700-1800	73.3	3.0	2.2	0.3	0.4	20.7	100.0
DR205	-	40,188	4,083	0700-0800	64.9	4.4	1.5	0.2	0.4	28.7	100.0
DR206	-	7,584	1,006	1700-1800	62.4	5.1	3.6	0.7	0.7	27.6	100.0
DR207	-	28,201	2,855	0800-0900	64.3	3.7	2.7	1.2	0.5	27.6	100.0

District : MACHANG

DR301	-	23,306	2,310	1700-1800	73.0	7.9	4.1	1.7	0.8	12.5	100.0
DR302	-	19,964	1,727	1700-1800	74.5	7.0	4.1	2.6	0.4	11.3	100.0

District : PASIR MAS

DR401	-	19,835	1,538	1500-1600	72.5	6.6	3.6	0.9	0.8	15.7	100.0
DR402	-	19,865	1,987	1700-1800	67.2	5.2	2.8	0.4	0.6	23.8	100.0
DR403	21,688	19,839	1,746	1700-1800	66.5	7.1	6.5	0.7	0.7	18.5	100.0
DR404	-	14,239	1,329	0800-0900	63.5	4.7	2.5	0.4	0.2	28.7	100.0
DR405	-	17,154	1,820	1700-1800	61.3	8.4	9.6	1.5	0.2	19.0	100.0

District : PASIR PUTEH

DR501	-	17,407	1,592	1500-1600	71.0	6.0	3.5	1.3	1.1	17.1	100.0
DR502	23,084	21,168	1,731	0700-0800	74.2	6.0	2.0	1.2	0.7	16.1	100.0
DR503	12,119	10,904	964	1800-1900	71.5	7.5	5.7	3.6	0.8	10.9	100.0
DR504	-	14,026	1,216	1500-1600	68.1	6.1	2.0	1.1	0.4	22.4	100.0

District : TANAH MERAH

DR601	-	14,176	1,328	1700-1800	69.7	8.3	5.1	4.2	0.5	12.3	100.0
DR602	-	10,375	1,058	1400-1500	60.2	13.4	6.6	5.4	0.6	13.8	100.0
DR604	-	17,330	1,714	1700-1800	72.9	5.5	4.4	1.6	0.4	15.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KELANTAN**

MARCH 2014

District : JELI

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
DR603	-	5,688	422	1800-1900	60.9	12.3	5.4	5.2	0.8	15.4	100.0
DR605	-	5,765	573	1200-1300	60.5	8.4	3.6	2.0	0.5	25.0	100.0

District : TUMPAT

DR701	-	31,864	3,417	1800-1900	62.1	7.6	2.8	0.2	0.2	27.1	100.0
DR702	-	18,815	2,214	0700-0800	61.4	9.2	3.7	0.3	0.6	24.8	100.0
DR703	-	22,931	2,527	0700-0800	57.6	9.7	3.7	0.2	0.3	28.4	100.0

District : KUALA KRAI

DR801	-	12,606	1,113	1000-1100	57.8	20.4	7.6	4.2	1.8	8.2	100.0
DR802	24,284	21,706	1,793	1700-1800	53.2	19.7	8.0	3.3	0.6	15.2	100.0

District : GUA MUSANG

DR901	-	6,273	513	0700-0800	49.9	21.2	4.9	5.9	1.9	16.2	100.0
DR902	-	9,606	795	1500-1600	50.8	25.6	7.7	6.0	0.8	9.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KELANTAN**

SEPTEMBER 2014

District : BACHOK

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
DR101	-	20,278	1,671	1700-1800	47.4	9.7	4.7	0.6	0.7	36.9	100.0
DR102	-	20,036	1,857	1300-1400	45.7	11.3	7.2	2.1	1.2	32.4	100.0

District : KOTA BHARU

DR201	-	29,634	6,182	1000-1100	70.8	6.3	2.7	1.0	0.6	18.6	100.0
DR202	-	46,342	4,412	0700-0800	71.9	3.1	1.8	0.4	0.4	22.4	100.0
DR203	-	29,245	2,685	0700-0800	69.8	4.5	3.8	1.9	0.9	19.1	100.0
DR204	-	28,295	2,519	0700-0800	67.3	3.6	4.0	1.6	0.8	22.8	100.0
DR205	-	54,293	4,987	0700-0800	69.1	2.6	0.7	0.1	0.3	27.1	100.0
DR206	-	9,697	937	1700-1800	67.2	4.9	1.9	0.3	0.7	25.0	100.0
DR207	-	39,324	5,214	0900-1000	59.5	3.1	1.4	0.5	0.4	35.1	100.0

District : MACHANG

DR301	-	25,394	2,882	0700-0800	71.2	8.5	4.1	1.9	0.8	13.5	100.0
DR302	-	18,040	1,616	1700-1800	70.4	8.0	5.5	3.2	0.5	12.4	100.0

District : PASIR MAS

DR401	-	19,002	1,565	0700-0800	71.5	7.8	4.4	1.0	0.9	14.4	100.0
DR402	-	18,719	1,560	1700-1800	63.6	5.8	3.7	0.4	0.8	25.8	100.0
DR403	21,489	19,823	1,998	0700-0800	64.7	7.6	8.1	1.1	0.7	17.8	100.0
DR404	-	13,549	1,608	0700-0800	59.0	5.4	4.0	0.2	0.2	31.2	100.0
DR405	-	18,637	1,945	0800-0900	60.1	8.0	11.0	1.2	0.2	19.5	100.0

District : PASIR PUTEH

DR501	-	14,785	1,218	1500-1600	70.7	4.9	3.4	1.6	1.2	18.2	100.0
DR502	24,968	22,901	2,304	0700-0800	72.0	7.9	2.6	0.8	0.6	16.0	100.0
DR503	11,034	9,956	938	1700-1800	71.1	6.5	7.1	3.1	0.9	11.2	100.0
DR504	-	10,838	1,026	0700-0800	61.6	9.3	3.1	0.6	0.4	24.9	100.0

District : TANAH MERAH

DR601	-	16,072	1,697	1500-1600	62.0	11.7	8.3	5.6	0.7	11.8	100.0
DR602	-	10,057	1,022	0700-0800	62.0	12.7	7.6	4.8	0.9	11.9	100.0
DR604	-	20,580	2,250	0800-0900	58.2	11.2	6.1	3.6	0.5	20.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **KELANTAN**

SEPTEMBER 2014

District : JELI

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
DR603	-	6,594	527	1700-1800	60.0	12.6	6.6	5.3	0.6	14.9	100.0
DR605	-	6,918	613	1700-1800	56.2	10.5	5.0	2.0	0.7	25.5	100.0

District : TUMPAT

DR701	-	27,199	2,498	0700-0800	64.7	6.1	2.9	0.3	0.2	25.9	100.0
DR702	-	15,865	1,613	0700-0800	62.0	7.1	4.8	0.3	0.5	25.3	100.0
DR703	-	22,379	2,474	0700-0800	60.7	6.3	2.9	0.3	0.2	29.6	100.0

District : KUALA KRAI

DR801	-	11,114	1,287	1700-1800	41.0	27.0	14.1	7.4	1.4	9.1	100.0
DR802	26,006	23,340	1,917	0700-0800	52.1	20.3	8.9	3.4	0.7	14.6	100.0

District : GUA MUSANG

DR901	-	8,312	737	1800-1900	44.7	25.5	8.6	6.9	1.2	13.1	100.0
DR902	-	10,567	1,082	1400-1500	47.9	26.2	9.3	7.7	0.9	8.0	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **KELANTAN**

AVERAGE 2014

District : BACHOK

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
DR101	22,613	1,911	47.6	11.3	6.2	0.6	0.5	33.8	F
DR102	21,284	1,980	45.9	10.7	7.0	1.6	0.9	33.9	F

District : KOTA BHARU

DR201	26,043	4,173	65.6	6.3	4.3	1.2	0.7	21.9	C
DR202	46,128	4,185	72.5	3.1	1.6	0.4	0.4	22.0	B
DR203	27,703	2,821	66.7	6.0	4.3	1.7	0.8	20.6	F
DR204	32,932	3,251	70.3	3.3	3.1	1.0	0.6	21.8	F
DR205	47,241	4,535	67.0	3.5	1.1	0.1	0.3	27.9	C
DR206	8,641	972	64.8	5.0	2.7	0.5	0.7	26.3	A
DR207	33,763	4,035	61.9	3.4	2.1	0.9	0.4	31.4	F

District : MACHANG

DR301	24,350	2,596	72.1	8.2	4.1	1.8	0.8	13.0	A
DR302	19,002	1,672	72.5	7.5	4.8	2.9	0.4	11.8	E

District : PASIR MAS

DR401	19,418	1,551	72.0	7.2	4.0	0.9	0.8	15.0	D
DR402	19,292	1,774	65.4	5.5	3.3	0.4	0.7	24.8	E
DR403	19,831	1,872	65.6	7.4	7.3	0.9	0.7	18.1	F
DR404	13,894	1,469	61.2	5.0	3.3	0.3	0.2	30.0	C
DR405	17,896	1,883	60.7	8.2	10.3	1.4	0.2	19.3	F

District : PASIR PUTEH

DR501	16,096	1,405	70.8	5.5	3.5	1.4	1.1	17.6	C
DR502	22,035	2,018	73.1	7.0	2.3	1.0	0.7	16.0	F
DR503	10,430	951	71.3	7.0	6.4	3.4	0.8	11.1	A
DR504	12,432	1,121	64.9	7.7	2.6	0.8	0.4	23.6	A

District : TANAH MERAH

DR601	15,124	1,513	65.8	10.0	6.7	4.9	0.6	12.0	E
DR602	10,216	1,040	61.1	13.1	7.1	5.1	0.8	12.9	B
DR604	18,955	1,982	65.5	8.4	5.2	2.6	0.5	17.8	F

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **KELANTAN**

AVERAGE 2014

District : JELI

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
DR603	6,141	475	60.5	12.4	6.0	5.2	0.7	15.2	A
DR605	6,342	593	58.4	9.5	4.3	2.0	0.6	25.3	A

District : TUMPAT

DR701	29,532	2,958	63.4	6.9	2.8	0.2	0.2	26.5	F
DR702	17,340	1,914	61.7	8.2	4.3	0.3	0.5	25.1	F
DR703	22,655	2,501	59.2	8.0	3.3	0.3	0.3	29.0	F

District : KUALA KRAI

DR801	11,860	1,200	49.4	23.7	10.9	5.8	1.6	8.7	F
DR802	22,523	1,855	52.6	20.0	8.5	3.4	0.6	14.9	F

District : GUA MUSANG

DR901	7,293	625	47.3	23.4	6.7	6.4	1.6	14.6	A
DR902	10,087	939	49.3	25.9	8.5	6.8	0.9	8.6	C

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **KELANTAN**

District : BACHOK

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
DR101	12,971	17,076	18,013	19,996	19,231	20,824	12,711	21,889	24,537	22,613	4.38	0.36
DR102	14,185	16,755	12,873	13,738	14,485	17,184	9,386	19,150	21,368	21,284	3.86	0.21

District : KOTA BHARU

DR201	24,934	22,900	35,931	30,698	43,222	31,602	37,939	42,433	32,263	26,043	2.39	0.11
DR202	44,043	58,134	56,676	43,771	55,608	48,957	57,936	46,291	47,187	46,128	-0.80	0.05
DR203	25,065	30,131	36,869	40,224	29,167	33,260	41,274	35,356	35,119	27,703	1.20	0.05
DR204	29,915	23,705	33,397	36,175	42,681	31,934	37,301	38,669	34,111	32,932	2.39	0.20
DR205	55,976	56,422	54,808	61,525	51,299	52,560	51,363	51,770	43,734	47,241	-2.50	0.62
DR206	7,769	7,142	7,758	8,195	6,867	7,246	8,991	9,667	7,232	8,641	1.50	0.17
DR207	25,458	22,899	27,826	30,799	31,822	30,154	29,824	44,473	39,093	33,763	5.14	0.65

District : MACHANG

DR301	20,675	21,306	21,624	22,157	22,312	23,023	23,725	24,919	25,688	24,350	2.26	0.91
DR302	17,455	14,108	14,942	15,530	15,731	17,188	18,756	19,101	18,465	19,002	2.75	0.57

District : PASIR MAS

DR401	13,966	15,893	17,418	17,128	17,359	18,193	19,270	19,442	19,632	19,418	3.27	0.84
DR402	15,755	15,208	15,408	18,138	17,275	17,028	16,438	17,614	16,311	19,292	1.62	0.42
DR403	16,642	16,894	17,776	19,197	20,585	18,873	18,831	20,095	20,824	19,831	2.13	0.67
DR404	9,391	9,941	9,892	11,793	14,464	11,604	11,588	11,990	12,011	13,894	3.36	0.52
DR405	-	13,417	14,117	14,562	15,377	18,208	19,876	19,922	17,443	17,896	4.45	0.67

District : PASIR PUTEH

DR501	10,802	11,029	16,676	12,742	19,051	19,240	16,698	15,656	13,970	16,096	3.49	0.26
DR502	15,925	17,468	18,332	20,388	19,685	24,831	23,795	21,093	23,781	22,035	3.93	0.67
DR503	8,326	8,341	9,117	9,066	9,677	12,369	13,133	10,300	11,331	10,430	3.72	0.51
DR504	9,774	12,976	12,085	11,069	14,673	16,304	14,365	13,323	14,814	12,432	2.71	0.29

District : TANAH MERAH

DR601	12,413	13,748	12,953	13,799	13,398	14,380	14,516	15,713	14,768	15,124	2.10	0.77
DR602	8,083	8,117	8,937	8,614	8,856	9,260	9,901	10,177	9,871	10,216	2.78	0.91
DR604	14,913	15,607	16,297	15,459	18,686	16,643	17,495	17,419	17,313	18,955	2.10	0.64

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **KELANTAN**

District : JELI

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
DR603	4,509	4,807	5,090	5,224	5,296	5,440	5,863	6,275	6,029	6,141	3.51	0.93
DR605	4,379	4,548	4,978	5,350	2,659	5,837	5,375	6,748	5,940	6,342	4.56	0.27

District : TUMPAT

DR701	23,674	28,904	21,888	23,870	22,099	25,635	28,666	29,956	27,868	29,532	2.42	0.36
DR702	11,918	18,252	12,637	12,383	13,194	12,664	13,051	15,143	13,922	17,340	1.52	0.10
DR703	18,776	20,097	17,129	17,522	18,706	19,189	21,622	22,243	26,287	22,655	3.35	0.59

District : KUALA KRAI

DR801	3,681	7,983	11,345	9,132	8,974	10,122	10,565	9,995	10,783	11,860	7.61	0.47
DR802	14,502	16,932	18,828	18,707	19,521	20,623	22,308	23,381	21,200	22,523	4.36	0.82

District : GUA MUSANG

DR901	4,189	6,675	8,471	5,425	5,596	7,365	7,356	7,082	7,859	7,293	3.89	0.31
DR902	6,413	5,673	6,567	7,271	7,955	8,842	9,219	8,848	8,688	10,087	5.68	0.85

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

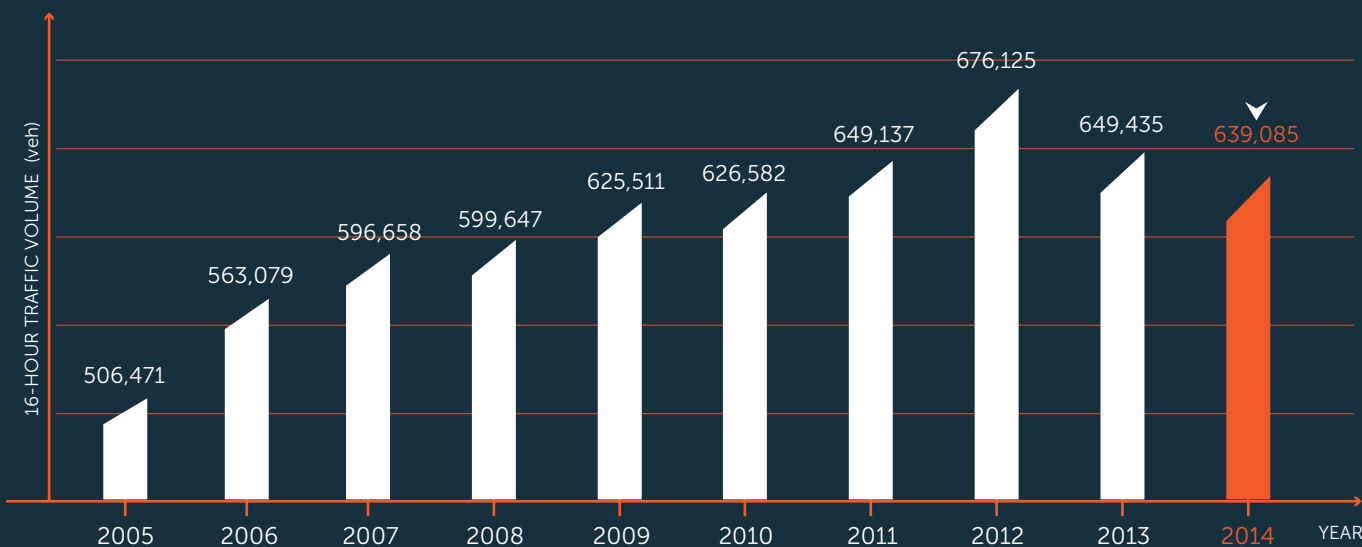


Figure 3.12-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Kelantan



There are 32 census stations in Kelantan. The 16-hour traffic volume documented since year 2005 to 2014 shows a significant increase between 2005 and 2006, and then began to steadily increase from 2007 until 2012. The number of vehicles on the road dropped 3.95% in year 2013 and keep dropping in year 2014 by 1.59%.

-1.59%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

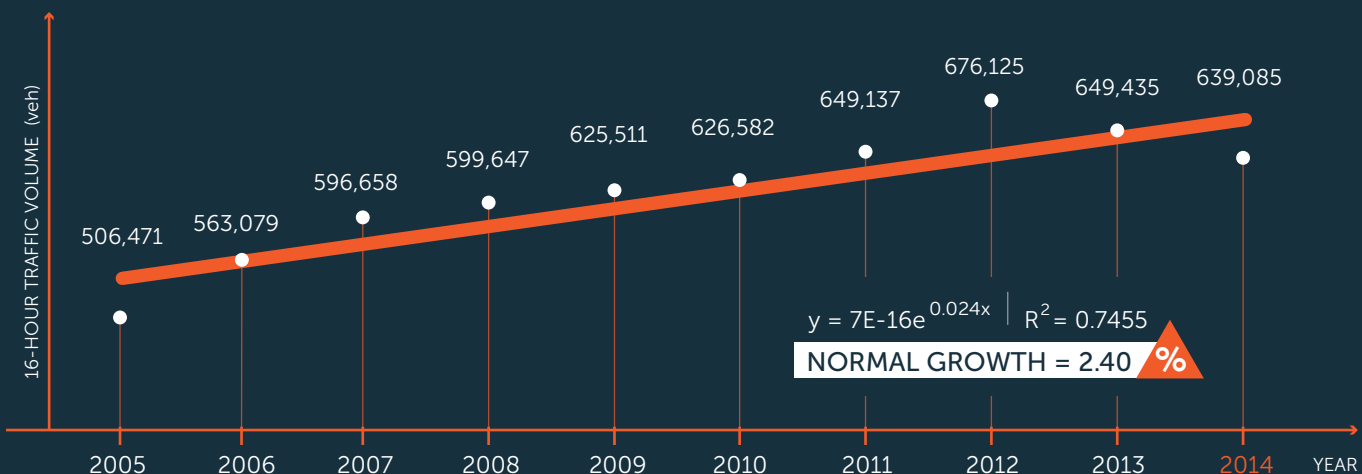


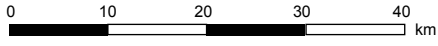
Figure 3.12-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Kelantan

Traffic growth rate recorded for the state of Kelantan is 2.40% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Kelantan.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

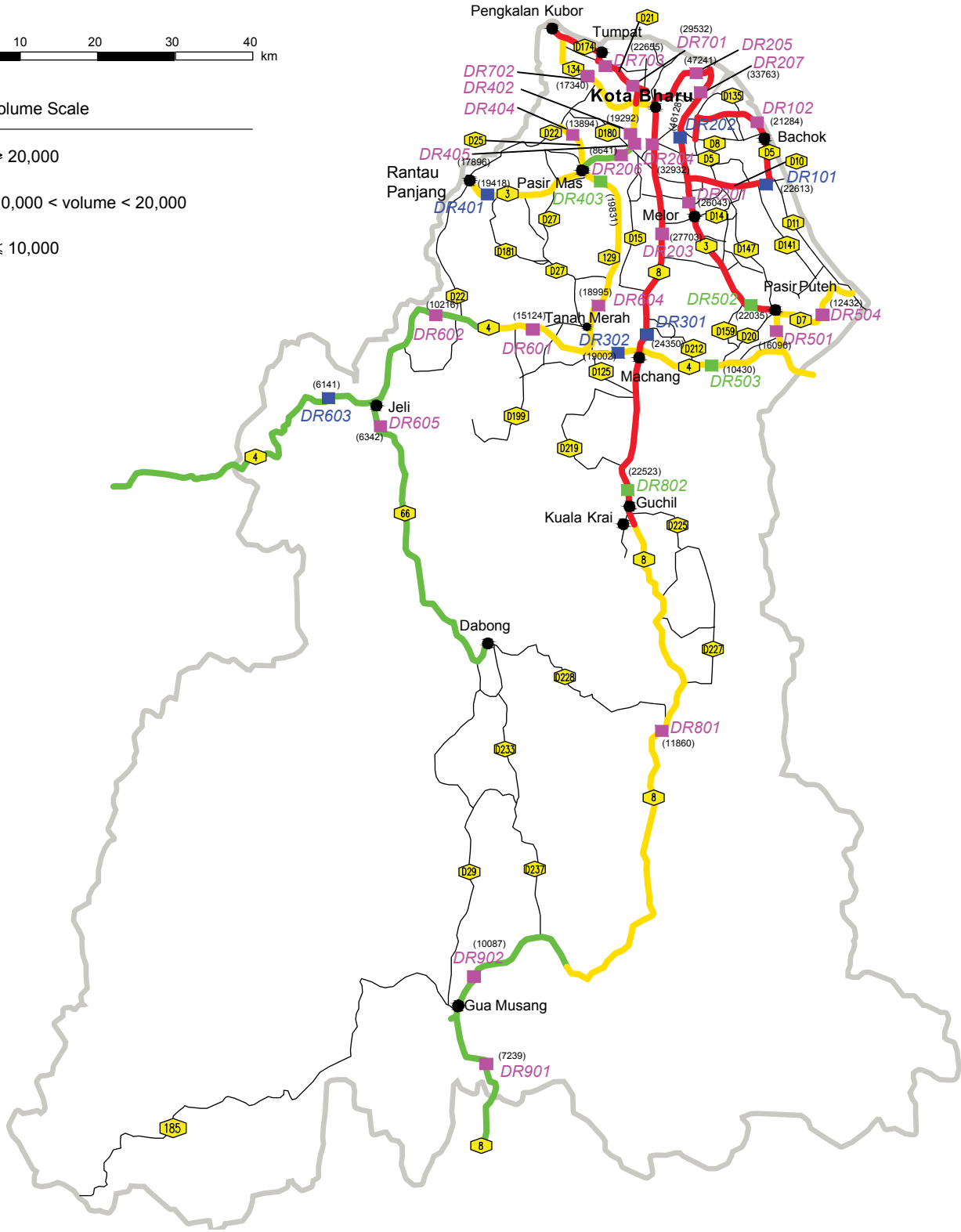
STATE : **KELANTAN**

LEGEND



Traffic Volume Scale

- ≥ 20,000
- 10,000 < volume < 20,000
- ≤ 10,000





Sarawak State Legislative Assembly Building, Kuching

SARAWAK

BUMI KENYALANG

33 Census Stations

Road Length : **30,841.02 km***

Land Area : **124,450 km²****

Population : **2,420,009 people****

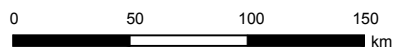
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

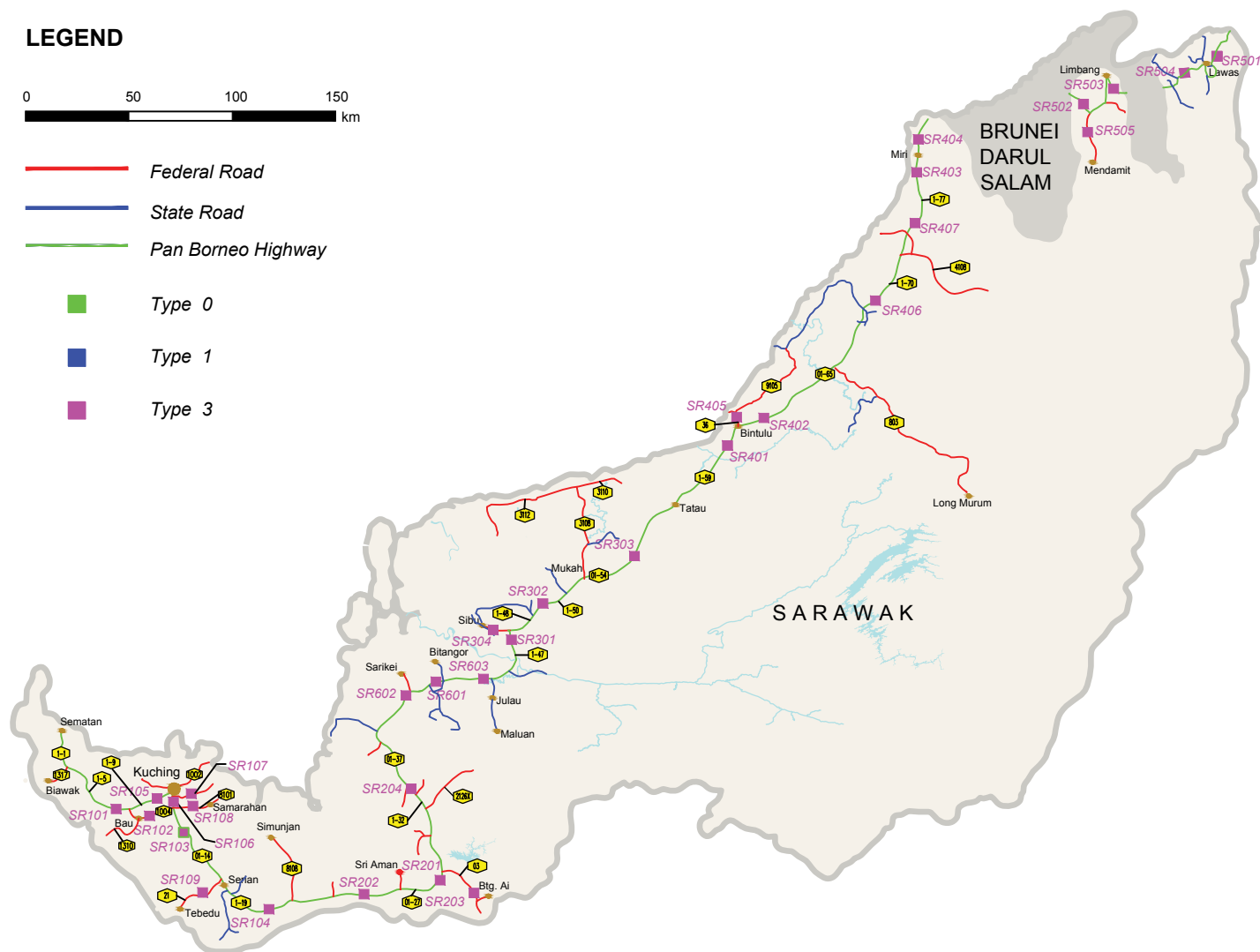
TRAFFIC CENSUS STATION MAP

STATE : **SARAWAK**

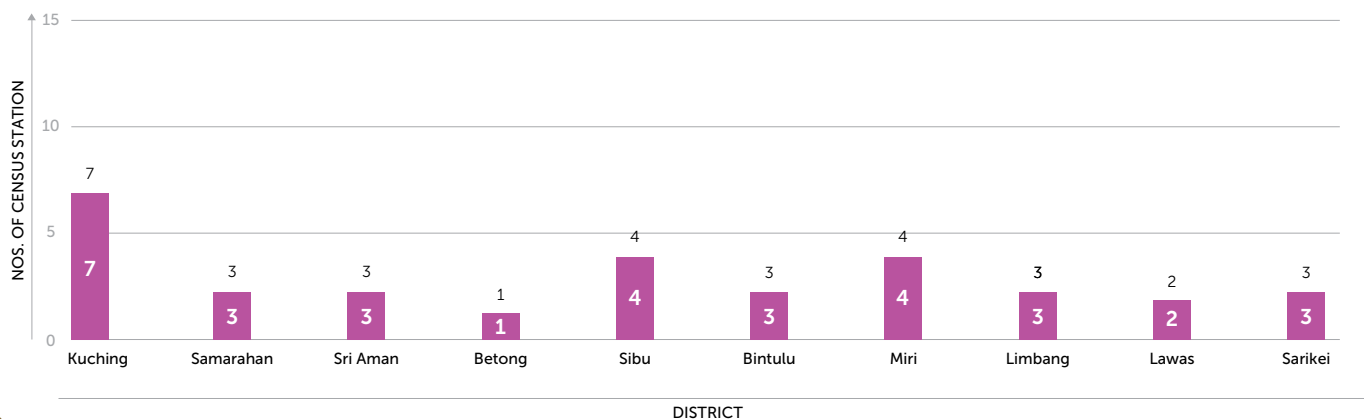
LEGEND



- Federal Road
- State Road
- Pan Borneo Highway
- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SARAWAK**

District : KUCHING

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
SR101	3	1	16.1	Bau - Semantan	N : 1° 29' 17.8" E : 110° 02' 27.1"	Single	2
SR102	3	Q6	8.1	Bau - Kuching	N : 1° 26' 30.9" E : 110° 13' 39.9"	Single	2
SR103	3	1	27.4	Kuching - Serian	N : 1° 21' 50.0" E : 110° 24' 14.0"	Dual	4
SR105	3	1	18.8	Bau - Kuching	N : 1° 27' 23.9" E : 110° 09' 37.2"	Single	2
SR106	3	1	10.5	Kuching - Serian	N : 1° 29' 08.3" E : 110° 19' 51.8"	Dual	4
SR107	3	31	4.5	Kuching Bypass	N : 1° 30' 38.2" E : 110° 21' 04.5"	Dual	6
SR110	3	900	-	Jalan Kuching (Airport Access - between BDC round-about and airport roundabout)	N : 1° 29' 57.5" E : 110° 20' 55.0"	Dual	6

District : SAMARAHAN

SR104	3	1	83.7	Kuching - Serian	N : 1° 06' 55.0" E : 110° 37' 25.5"	Single	2
SR108	3	1	10.0	Jalan Datuk Mohamad Musa	N : 1° 27' 14.8" E : 110° 24' 34.6"	Single	2
SR109	3	21	22.0	Serian - Tebedu	N : 1° 07' 23.4" E : 110° 25' 05.2"	Dual	4

District : SRI AMAN

SR201	3	1	41.9	Sri Aman - Sarikei	N : 1° 10' 20.0" E : 111° 39' 34.8"	Single	2
SR202	3	1	46.9	Sri Aman - Serian	N : 1° 05' 07.5" E : 111° 11' 29.8"	Single	2
SR203	3	3	18.5	Batang Ai Road	N : 1° 13' 09.5" E : 111° 39' 16.5"	Single	2

District : BETONG

SR204	3	1	84.9	Betong - Sarikei (Simpang Jalan Paku)	N : 1° 27' 44.8" E : 111° 33' 59.6"	Single	2
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District : SIBU

SR301	3	1	9.0	Durin Ferry - Junction to Sibu	N : 2° 12' 29.3" E : 112° 00' 54.6"	Dual	4
SR302	3	1	50.8	Sibu - Junc. to Mukah	N : 2° 25' 59.3" E : 112° 10' 02.0"	Single	2
SR303	3	1	121.6	Sibu - Tatau	N : 2° 44' 05.2" E : 112° 40' 03.5"	Single	2
SR304	3	800-10A	10.0	Rejang Port access road	N : 2° 17' 55.3" E : 112° 52' 58.0"	Dual	4

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SARAWAK**

District : BINTULU

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
SR401	3	1	20.0	Bintulu - Sibul	N : 3° 05' 55.8" E : 113° 01' 21.6"	Single	2
SR402	3	1	29.0	Bintulu - Miri	N : 3° 13' 35.3" E : 113° 09' 39.6"	Single	2
SR405	3	36	9.5	Bintulu - Tg. Kidurong	N : 3° 13' 59.9" E : 113° 05' 20.8"	Dual	4

District : MIRI

SR403	3	1	6.2	Miri - Bintulu (before junction to Airport)	N : 4° 20' 16.9" E : 114° 00' 00.1"	Single	2
SR404	3	22	11.3	Miri - Brunei Border	N : 4° 29' 08.0" E : 114° 00' 26.5"	Dual	4
SR406	3	1	90.2	Miri - Sg. Suai	N : 3° 44' 04.0" E : 113° 46' 35.9"	Single	2
SR407	3	1	37.4	Miri - Junc. Beluru	N : 4° 08' 41.6" E : 114° 00' 15.7"	Single	2

District : LIMBANG

SR502	3	22	23.3	Limbang - Brunei Border (Tedungan)	N : 4° 38' 38.5" E : 114° 53' 32.4"	Single	2
SR503	3	22	1.6	Limbang - Brunei Border (Sg.Padaruan)	N : 4° 45' 44.9" E : 115° 01' 18.2"	Single	2
SR505	3	Q296	32.2	Limbang - Ukong	N : 4° 33' 31.0" E : 114° 53' 14.5"	Single	2

District : LAWAS

SR501	3	23	5.6	Lawas - Merapok	N : 4° 48' 32.6" E : 115° 24' 35.0"	Single	2
SR504	3	23	1.6	Lawas - Trusan	N : 4° 51' 21.9" E : 115° 23' 40.1"	Single	2

District : SARIKEI

SR601	3	1	29.0	Sarikei - Sibul	N : 2° 03' 35.2" E : 111° 41' 36.4"	Single	2
SR602	3	1	50.4	Sarikei - Junc. to Bintangor	N : 2° 03' 42.7" E : 111° 30' 49.5"	Single	2
SR603	3	1	40.3	Bintangor - Durin Ferry	N : 2° 03' 31.2" E : 111° 54' 39.2"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SARAWAK**

MARCH 2014

District : KUCHING

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
SR101	-	3,577	368	0700-0800	49.7	18.4	8.2	4.7	0.9	18.3	100.0
SR102	-	16,647	1,818	1700-1800	45.4	16.6	9.3	6.9	0.7	21.2	100.0
SR103	-	30,217	3,447	0800-0900	54.4	10.8	6.2	7.6	1.4	19.8	100.0
SR105	-	7,035	974	0700-0800	59.3	16.0	6.1	3.1	0.7	14.9	100.0
SR106	-	50,007	5,838	1700-1800	59.9	12.1	5.9	2.6	1.2	18.4	100.0
SR107	-	60,856	7,307	1700-1800	70.5	7.5	5.2	3.4	0.2	13.2	100.0
SR110	-	48,735	4,636	1700-1800	70.0	12.8	3.8	1.7	0.2	11.5	100.0

District : SAMARAHAN

SR104	-	6,166	598	1600-1700	49.8	22.6	7.7	8.2	2.6	9.2	100.0
SR108	-	14,518	1,401	0600-0700	55.8	11.9	1.1	0.2	0.6	30.4	100.0
SR109	-	2,294	254	0600-0700	44.9	17.5	8.8	5.6	3.0	20.1	100.0

District : SRI AMAN

SR201	-	6,280	590	1200-1300	46.8	30.1	7.1	6.8	1.4	7.8	100.0
SR202	-	4,197	400	1200-1300	52.2	15.8	8.7	12.6	2.0	8.7	100.0
SR203	-	2,133	299	1200-1300	44.5	24.6	10.6	3.6	0.2	16.4	100.0

District : BETONG

SR204	-	4,516	448	1400-1500	44.7	31.6	7.2	8.7	2.0	5.7	100.0
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District : SIBU

SR301	-	12,100	1,590	0600-0700	39.1	28.3	10.8	5.2	0.5	16.0	100.0
SR302	-	6,009	482	1300-1400	33.9	30.3	13.5	14.8	3.8	3.7	100.0
SR303	-	4,012	306	1000-1100	23.9	23.7	22.0	17.9	6.9	5.7	100.0
SR304	-	27,535	2,426	1700-1800	37.5	23.0	11.5	5.8	1.3	20.9	100.0

District : BINTULU

SR401	-	4,896	403	1300-1400	33.7	25.6	8.4	24.1	3.3	5.0	100.0
SR402	-	7,792	688	1800-1900	32.9	35.9	9.5	13.5	1.5	6.6	100.0
SR405	-	31,652	2,671	1800-1900	44.2	23.5	12.5	7.9	2.6	9.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SARAWAK**

MARCH 2014

District : MIRI

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
SR403	-	10,689	1,042	0700-0800	52.7	28.4	6.2	3.9	1.8	7.0	100.0
SR404	-	11,346	1,163	1700-1800	53.0	20.2	7.6	7.5	1.0	10.7	100.0
SR406	-	3,622	289	0900-1000	29.9	38.3	7.6	16.3	3.1	4.8	100.0
SR407	-	5,703	460	1700-1800	31.2	33.8	7.8	13.8	2.3	11.0	100.0

District : LIMBANG

SR502	-	4,531	377	1400-1500	68.6	16.2	4.2	4.3	0.7	6.0	100.0
SR503	-	11,066	1,606	0600-0700	56.6	13.0	1.8	1.2	1.1	26.3	100.0
SR505	-	1,226	129	1300-1400	36.7	16.5	14.8	9.4	2.2	20.4	100.0

District : LAWAS

SR501	-	5,206	487	1700-1800	40.6	37.6	8.1	3.7	0.1	9.9	100.0
SR504	-	7,257	747	1400-1500	59.3	18.8	4.5	2.0	0.1	15.5	100.0

District : SARIKEI

SR601	-	2,075	190	1000-1100	38.6	23.3	8.6	6.2	0.6	22.7	100.0
SR602	-	2,095	187	1800-1900	32.7	24.9	14.1	18.0	1.1	9.2	100.0
SR603	-	2,112	229	0900-1000	52.0	17.5	6.9	4.5	0.6	18.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SARAWAK**

SEPTEMBER 2014

District : KUCHING

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
SR101	-	3,587	385	1700-1800	41.2	20.1	9.4	8.1	1.1	20.0	100.0
SR102	-	22,060	2,432	0700-0800	42.8	16.0	9.9	10.4	0.6	20.2	100.0
SR103	-	35,399	3,327	0800-0900	52.5	11.0	9.4	7.8	1.2	18.1	100.0
SR105	-	7,667	786	0700-0800	57.4	17.5	6.2	2.9	0.7	15.3	100.0
SR106	-	51,273	6,632	1700-1800	56.6	18.0	6.5	2.2	0.9	15.7	100.0
SR107	-	54,683	7,215	1700-1800	60.5	16.8	5.9	3.7	0.3	12.7	100.0
SR110	-	49,696	4,690	1700-1800	69.5	12.9	4.0	1.9	0.2	11.6	100.0

District : SAMARAHAN

SR104	-	6,713	636	1600-1700	47.9	22.6	8.3	8.7	3.0	9.6	100.0
SR108	-	15,144	1,449	0600-0700	54.9	12.3	1.4	0.3	0.7	30.4	100.0
SR109	-	2,592	283	0600-0700	43.6	17.4	8.8	6.2	3.6	20.3	100.0

District : SRI AMAN

SR201	-	5,005	445	1000-1100	39.6	32.4	9.7	9.5	1.6	7.2	100.0
SR202	-	3,537	289	1200-1300	37.3	19.3	12.5	17.8	2.4	10.7	100.0
SR203	-	2,471	286	1600-1700	39.0	25.7	13.6	6.2	0.2	15.3	100.0

District : BETONG

SR204	-	4,967	438	1700-1800	49.0	24.5	5.1	9.2	1.8	10.4	100.0
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District : SIBU

SR301	-	16,671	1,639	1700-1800	36.6	20.1	13.7	9.7	0.6	19.3	100.0
SR302	-	8,550	658	1600-1700	31.8	24.2	19.3	15.5	5.9	3.3	100.0
SR303	-	5,023	459	1000-1100	30.6	26.2	18.6	19.3	2.7	2.7	100.0
SR304	-	29,920	2,505	1200-1300	32.6	20.5	13.3	10.8	3.9	18.9	100.0

District : BINTULU

SR401	-	5,353	433	1300-1400	32.9	25.4	8.5	23.9	3.5	5.8	100.0
SR402	-	9,562	2,070	1000-1100	30.7	43.2	6.0	12.8	1.5	5.8	100.0
SR405	-	26,338	2,711	0700-0800	51.5	25.2	11.5	2.2	1.4	8.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SARAWAK**

SEPTEMBER 2014

District : MIRI

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
SR403	-	11,085	949	0700-0800	48.7	27.5	7.5	6.7	1.9	7.8	100.0
SR404	-	10,616	1,098	0700-0800	47.2	21.3	10.6	9.6	1.4	9.9	100.0
SR406	-	3,717	328	1400-1500	32.6	42.7	6.8	10.4	3.2	4.3	100.0
SR407	-	3,066	331	1200-1300	28.6	33.1	7.5	21.1	2.8	6.9	100.0

District : LIMBANG

SR502	-	4,745	408	0600-0700	67.2	16.2	4.5	4.4	0.8	6.8	100.0
SR503	-	11,234	1,665	0600-0700	56.5	12.9	1.8	1.3	1.1	26.4	100.0
SR505	-	1,375	145	1400-1500	35.9	16.8	16.7	8.4	1.6	20.6	100.0

District : LAWAS

SR501	-	5,583	507	1700-1800	40.1	37.2	8.5	4.1	0.2	9.9	100.0
SR504	-	7,143	746	1700-1800	54.2	24.0	5.9	1.9	0.1	13.9	100.0

District : SARIKEI

SR601	-	4,278	566	0700-0800	39.1	23.5	8.3	5.5	0.2	23.4	100.0
SR602	-	2,800	275	1600-1700	31.9	33.5	9.9	12.3	2.9	9.5	100.0
SR603	-	2,768	221	1700-1800	50.2	24.1	5.8	8.3	0.2	11.5	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SARAWAK**

AVERAGE 2014

District : KUCHING

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
SR101	3,582	377	45.4	19.2	8.8	6.4	1.0	19.1	A
SR102	19,354	2,125	44.1	16.3	9.6	8.6	0.6	20.7	F
SR103	32,808	3,387	53.4	10.9	7.8	7.7	1.3	19.0	C
SR105	7,351	880	58.3	16.7	6.2	3.0	0.7	15.1	A
SR106	50,640	6,235	58.3	15.0	6.2	2.4	1.0	17.1	F
SR107	57,770	7,261	65.5	12.1	5.6	3.6	0.3	12.9	E
SR110	31,940	3,043	62.4	12.5	2.6	1.0	0.5	20.9	A

District : SAMARAHAN

SR104	6,440	617	48.8	22.6	8.0	8.4	2.8	9.4	A
SR108	14,831	1,425	55.3	12.1	1.3	0.3	0.7	30.4	C
SR109	2,443	269	44.2	17.5	8.8	5.9	3.3	20.2	A

District : SRI AMAN

SR201	5,643	518	43.2	31.3	8.4	8.2	1.5	7.5	A
SR202	3,867	345	44.7	17.6	10.6	15.2	2.2	9.7	A
SR203	2,302	293	41.8	25.1	12.1	4.9	0.2	15.9	A

District : BETONG

SR204	4,742	443	46.8	28.1	6.2	9.0	1.9	8.1	A
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District : SIBU

SR301	14,386	1,615	37.9	24.2	12.2	7.5	0.5	17.7	A
SR302	7,280	570	32.9	27.2	16.4	15.1	4.9	3.5	B
SR303	4,518	383	27.3	24.9	20.3	18.6	4.8	4.2	A
SR304	28,728	2,466	35.0	21.8	12.4	8.3	2.6	19.9	C

District : BINTULU

SR401	5,125	418	33.3	25.5	8.4	24.0	3.4	5.4	A
SR402	8,677	1,379	31.8	39.6	7.8	13.1	1.5	6.2	F
SR405	28,995	2,691	47.9	24.3	12.0	5.0	2.0	8.8	D

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SARAWAK**

AVERAGE 2014

District : MIRI

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
SR403	10,887	996	50.7	27.9	6.9	5.3	1.8	7.4	C
SR404	10,981	1,131	50.1	20.8	9.1	8.5	1.2	10.3	A
SR406	3,670	309	31.2	40.5	7.2	13.4	3.1	4.6	A
SR407	4,385	396	29.9	33.5	7.6	17.4	2.5	9.0	A

District : LIMBANG

SR502	4,638	393	67.9	16.2	4.3	4.4	0.8	6.4	A
SR503	11,150	1,636	56.5	12.9	1.8	1.2	1.1	26.4	D
SR505	1,301	137	36.3	16.6	15.8	8.9	1.9	20.5	A

District : LAWAS

SR501	4,742	527	39.9	30.5	8.2	4.6	0.1	16.6	A
SR504	7,200	747	56.7	21.4	5.2	1.9	0.1	14.7	A

District : SARIKEI

SR601	3,177	378	38.9	23.4	8.4	5.8	0.4	23.0	A
SR602	2,448	231	32.3	29.2	12.0	15.1	2.0	9.3	A
SR603	2,440	225	51.1	20.8	6.3	6.4	0.4	15.0	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SARAWAK**

District : KUCHING

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
SR101	3,466	2,457	2,779	3,188	3,143	3,091	3,504	5,780	3,512	3,582	4.08	0.30
SR102	7,698	10,754	9,655	14,825	20,595	18,113	21,718	15,568	22,340	19,354	10.19	0.69
SR103	26,599	22,781	21,071	22,225	24,564	30,616	31,112	32,889	27,987	32,808	4.11	0.55
SR105	3,623	5,778	5,780	5,710	6,496	6,322	6,893	10,032	7,430	7,351	6.92	0.65
SR106	28,355	35,529	41,044	35,994	30,385	40,996	39,562	53,073	68,841	50,640	7.10	0.65
SR107	75,630	51,971	50,491	50,441	37,394	50,352	46,154	42,332	54,475	57,770	-1.80	0.08
SR110	26,540	30,655	39,194	44,995	40,554	28,674	34,868	38,175	28,102	31,940	-0.10	0.00

District : SAMARAHAN

SR104	2,823	4,189	4,380	4,187	5,047	5,244	5,608	6,092	11,200	6,440	10.22	0.74
SR108	20,075	16,154	19,177	19,691	26,053	17,594	29,842	21,143	32,729	14,831	2.16	0.06
SR109	1,512	1,735	1,449	1,576	1,618	1,895	1,909	2,043	11,346	2,443	12.07	0.36

District : SRI AMAN

SR201	2,773	2,720	3,269	3,374	4,157	4,216	4,197	4,658	3,776	5,643	6.74	0.79
SR202	2,409	2,331	2,747	2,587	2,632	2,426	2,950	3,264	3,063	3,867	4.45	0.72
SR203	1,280	1,164	1,404	1,613	1,773	1,716	1,914	2,474	2,495	2,302	8.45	0.91

District : BETONG

SR204	1,760	1,841	3,082	3,039	2,727	3,747	4,796	6,231	5,992	4,742	13.57	0.84
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District : SIBU

SR301	4,380	3,114	3,799	1,700	1,353	4,365	4,698	8,827	8,837	14,386	16.03	0.44
SR302	3,791	9,129	3,143	8,072	5,396	3,310	4,471	5,683	7,778	7,280	3.30	0.07
SR303	1,915	2,692	5,883	1,987	2,090	2,726	3,269	4,444	6,557	4,518	8.68	0.34
SR304	39,588	34,821	32,924	34,674	27,969	24,998	23,730	25,254	28,252	28,728	-4.20	0.57

District : BINTULU

SR401	5,952	6,779	6,240	7,250	9,808	10,957	14,520	4,342	4,476	5,125	-2.30	0.03
SR402	5,702	4,828	4,771	5,924	7,880	8,507	4,178	5,355	9,139	8,677	4.76	0.25
SR405	17,554	17,168	13,129	15,814	21,873	19,003	36,245	28,603	28,131	28,995	8.61	0.64

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SARAWAK**

District : MIRI

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
SR403	18,046	10,345	6,882	9,984	11,060	10,506	12,211	11,805	10,865	10,887	-0.60	0.01
SR404	21,345	9,297	7,961	11,992	7,633	9,489	10,228	9,248	10,771	10,981	-2.70	0.08
SR406	2,751	2,757	1,961	3,063	4,159	4,030	3,567	3,539	3,586	3,670	4.73	0.40
SR407	3,827	4,897	6,269	8,858	6,698	10,990	4,645	3,926	3,521	4,385	-2.90	0.06

District : LIMBANG

SR502	4,534	4,920	5,038	3,957	4,065	4,037	8,335	4,144	4,660	4,638	0.65	0.01
SR503	18,016	16,317	15,830	16,319	14,141	19,032	13,519	11,014	12,742	11,150	-4.90	0.62
SR505	2,000	677	952	958	888	1,052	1,054	872	1,312	1,301	0.47	0.00

District : LAWAS

SR501	3,240	3,608	3,298	3,265	3,584	3,217	3,911	3,582	3,512	4,742	2.48	0.41
SR504	4,399	3,935	5,235	4,519	5,139	3,653	6,683	6,448	7,243	7,200	6.41	0.59

District : SARIKEI

SR601	1,502	1,348	1,375	1,503	1,581	1,665	2,088	2,169	2,321	3,177	8.40	0.85
SR602	4,307	5,935	1,176	1,395	1,536	1,808	1,866	2,033	2,144	2,448	-5.10	0.10
SR603	1,254	1,263	1,208	1,164	1,274	1,446	1,659	1,821	1,922	2,440	7.38	0.82

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

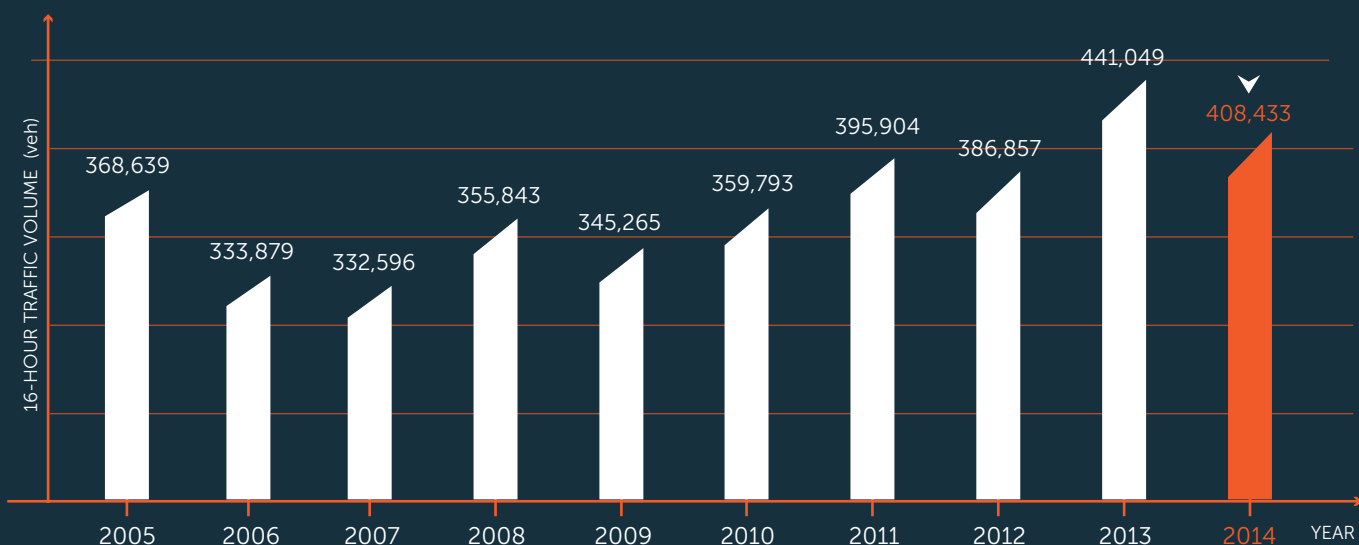


Figure 3.13-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Sarawak



There are 33 census stations in Sarawak. The 16-hour traffic volume documented since year 2005 to 2014 shows a gradual decrease from 2005 to 2007. Traffic volume increase again in 2008, and from there interval increase and decrease, with overall increase in traffic growth rate until 2013. However in year 2014, the amount of vehicle decreased by 7.40% which equivalent to 32,616 vehicles.

-7.40%
DECREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

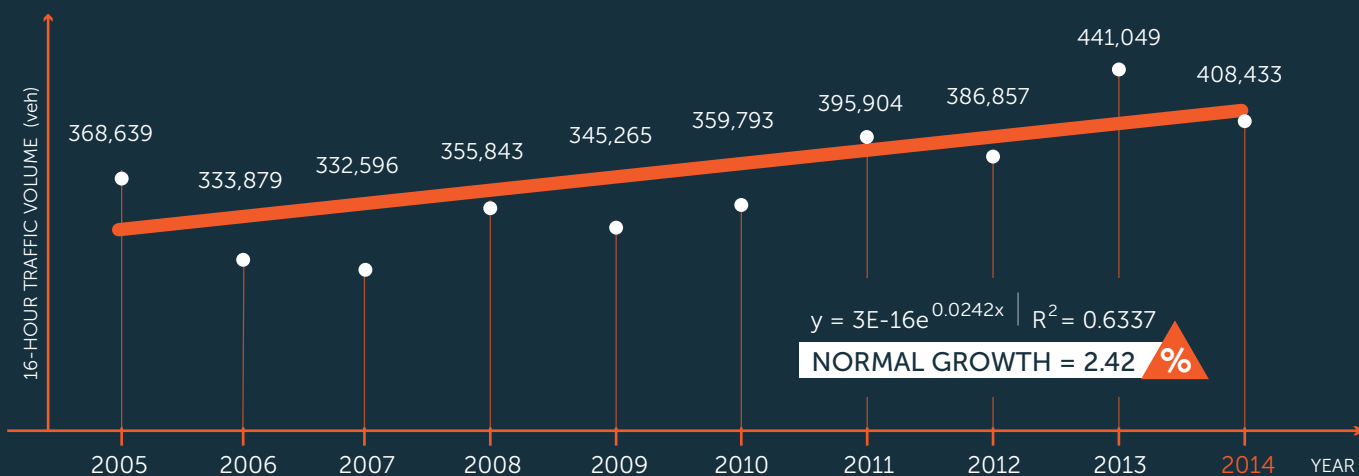


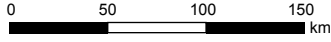
Figure 3.13-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Sarawak

Traffic growth rate recorded for the state of Sarawak is 2.42% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Sarawak.

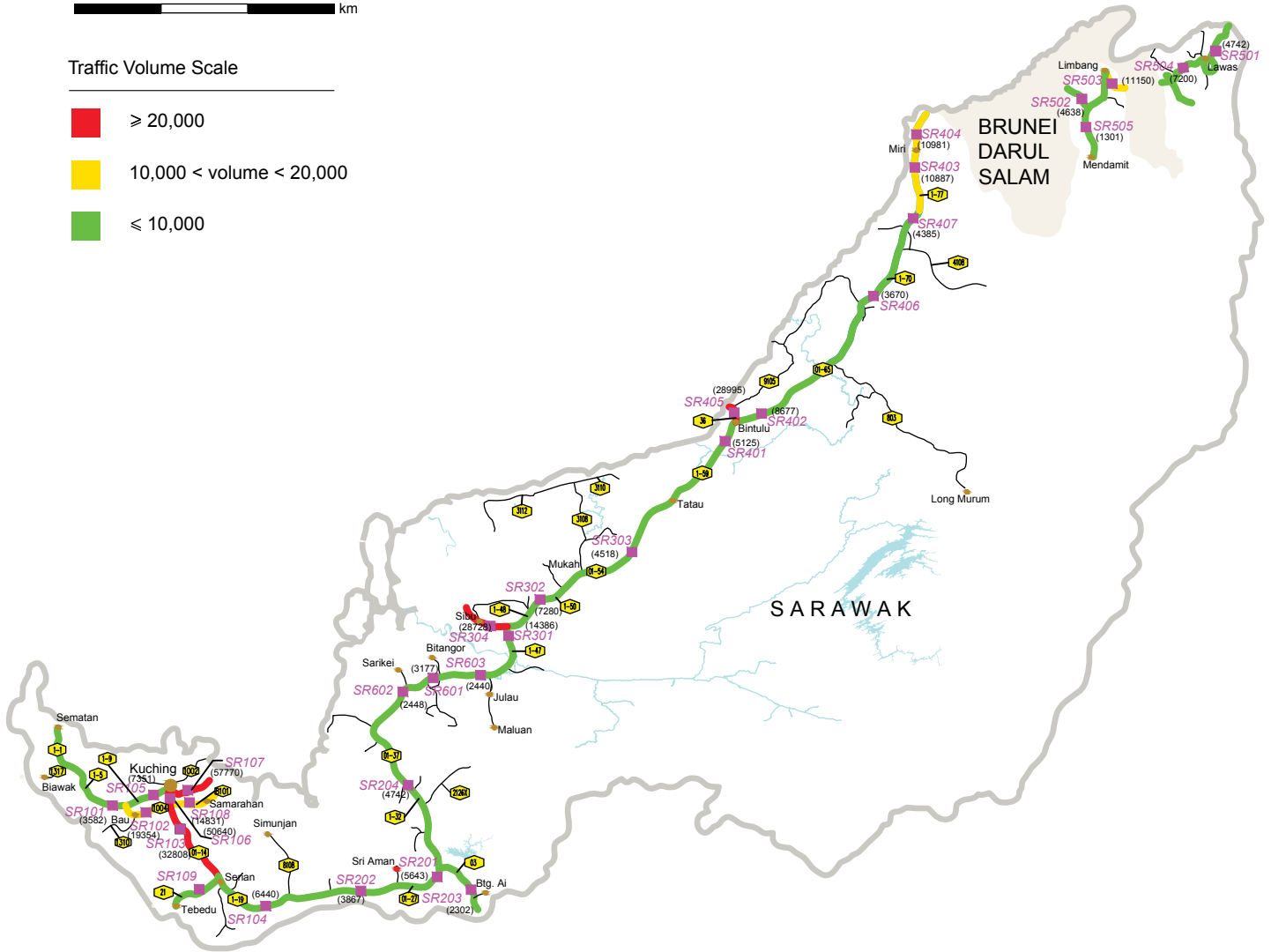
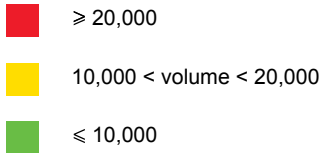
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **SARAWAK**

LEGEND



Traffic Volume Scale





Mount Kinabalu

SABAH

NEGERI DI BAWAH BAYU

21 Census Stations

Road Length : **22,290.67 km***

Land Area : **73,631 km²****

Population : **3,120,040 people****

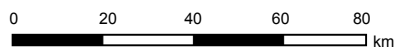
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

TRAFFIC CENSUS STATION MAP

STATE : **SABAH**

LEGEND

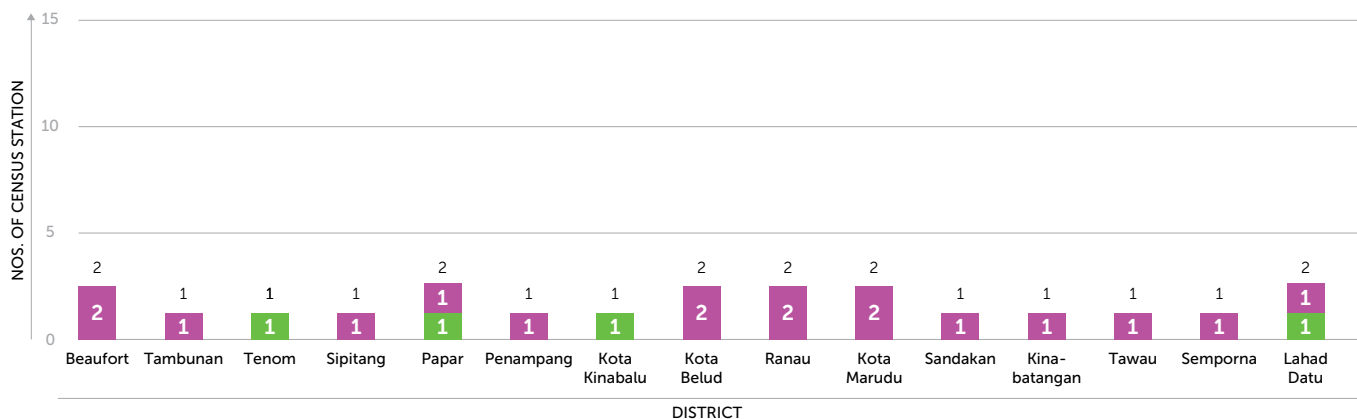


- Federal Road
- State Road
- Pan Borneo Highway

- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SABAH**

District : BEAUFORT

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
HR101	3	1	4.8	Beaufort / Sipitang - Sindumin Road	N : 5° 17' 11.0" E : 115° 40' 59.0"	Single	2
HR105	3	502	15.0	Klias Kecil - Beaufort Menubuk Highway	N : 5° 25' 56.0" E : 115° 38' 47.0"	Single	2

District : TAMBUNAN

HR103	3	500	9.0	KK - Sepulut Highway	N : 5° 36' 50.0" E : 116° 18' 39.4"	Single	2
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District : TENOM

HR104	0	A33	9.0	Tenom - Tomani / Bekuku H'way	N : 5° 03' 47.5" E : 115° 57' 02.7"	Single	2
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District : SIPITANG

HR106	3	1	133.5	A2, KK / Sindumin (0.5km Mesapol - Sipitang)	N : 5° 06' 34.3" E : 115° 35' 11.4"	Single	2
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District : PAPAR

HR201	0	1	22.0	Kota Kinabalu - Sindumin (Kg Mook)	N : 5° 48' 53.6" E : 116° 02' 39.4"	Single	2
HR209	3	1	57.0	Kota Kinabalu - Sindumin (Mandahan)	N : 5° 34' 56.4" E : 115° 52' 46.0"	Single	2

District : PENAMPANG

HR202	3	500	18.0	A3, KK - Tambunan (8km from A / A31 Intersection)	N : 5° 55' 16.6" E : 116° 09' 40.5"	Single	2
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District : KOTA KINABALU

HR203	0	1	25.0	Telipok Town	N : 6° 05' 36.3" E : 116° 11' 56.0"	Dual	4
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District : KOTA BELUD

HR204	3	1	69.0	KK - Kudat (Kg Mantanau)	N : 6° 20' 11.0" E : 116° 24' 00.7"	Single	2
HR300	3	1	105.0	KK - Kudat (Kg. Lentigi)	N : 6° 30' 14.9" E : 116° 34' 06.3"	Single	2

District : RANAU

HR207	3	22	81.0	KK - Sandakan (junction towards Ranau)	N : 5° 58' 52.6" E : 116° 33' 43.6"	Single	2
HR208	3	22	114.0	KK - Sandakan (after Poring junction)	N : 5° 59' 13.6" E : 116° 41' 29.2"	Single	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **SABAH**

District : KOTA MARUDU

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
HR301	3	1	-	Kudat - Kota Kinabalu (Batutai)	N : 6° 35' 25.0" E : 116° 43' 18.8"	Single	2
HR302	3	A12	-	Kota Marudu - Pitas (Marasinsim)	N : 6° 36' 50.2" E : 116° 52' 16.9"	Single	2

District : SANDAKAN

HR403	3	22	25.0	KK - Sandakan (25 km from Sandakan towards KK - (Gum-Gum))	N : 5° 53' 29.6" E : 117° 55' 28.9"	Single	2
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District : KINABATANGAN

HR404	3	13	54.0	Sandakan - Lahad Datu	N : 5° 45' 47.3" E : 117° 46' 18.3"	Single	2
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District : TAWAU

HR501	3	13	35.0	Tawau - Sandakan Highway (Near Balung Junction)	N : 4° 22' 00.0" E : 118° 06' 20.0"	Single	2
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District : SEMPORNA

HR506	3	A51	0.2	Jalan Sing - Sing (18km from Bandar Semporna)	N : 4° 25' 22.6" E : 118° 28' 33.5"	Single	2
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District : LAHAD DATU

HR504	0	13	14.5	Sg. Segama Crossing	N : 5° 06' 06.2" E : 118° 13' 57.5"	Single	2
HR507	3	13	81.0	Kunak - Lahad Datu	N : 4° 41' 25.3" E : 118° 12' 43.0"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SABAH**

MARCH 2014

District : BEAUFORT

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
HR101	-	6,300	571	1500-1600	41.7	33.6	9.7	5.1	1.0	9.0	100.0
HR105	-	4,383	352	1700-1800	51.1	23.4	8.6	2.1	1.3	13.6	100.0

District : TAMBUNAN

HR103	-	3,212	281	1500-1600	46.7	25.9	10.7	8.4	0.1	8.1	100.0
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District : TENOM

HR104	3,019	2,570	189	0900-1000	29.3	26.1	2.0	1.8	12.6	28.1	100.0
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District : SIPITANG

HR106	-	12,102	1,114	1300-1400	38.6	14.9	5.5	2.2	0.4	38.5	100.0
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District : PAPAR

HR201	17,427	16,125	1,288	1800-1900	54.2	26.3	8.2	4.2	1.3	5.9	100.0
HR209	-	13,146	1,123	1700-1800	46.6	25.4	9.5	5.3	3.5	9.8	100.0

District : PENAMPANG

HR202	-	4,246	393	1600-1700	42.3	26.2	13.0	8.7	1.5	8.3	100.0
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District : KOTA KINABALU

HR203	60,758	46,584	4,008	1800-1900	53.6	24.0	8.9	5.2	1.1	7.3	100.0
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District : KOTA BELUD

HR204	-	9,901	789	1700-1800	58.9	25.0	8.6	1.5	0.8	5.1	100.0
HR300	-	4,700	462	1100-1200	42.7	38.2	11.0	3.8	0.3	3.9	100.0

District : RANAU

HR207	-	4,416	444	1500-1600	36.3	35.9	14.6	8.8	2.5	1.9	100.0
HR208	-	3,604	308	1300-1400	39.1	36.8	11.0	7.7	2.2	3.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SABAH**

MARCH 2014

District : KOTA MARUDU

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
HR301	-	7,948	547	1100-1200	30.3	26.7	21.5	9.6	2.1	9.9	100.0
HR302	-	6,255	477	0800-0900	27.6	25.3	24.9	10.2	2.2	9.8	100.0

District : SANDAKAN

HR403	-	14,149	1,159	1700-1800	33.7	33.6	15.5	11.2	2.6	3.3	100.0
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District : KINABATANGAN

HR404	-	6,664	620	1500-1600	31.4	41.8	9.6	12.9	1.1	3.3	100.0
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District : TAWAU

HR501	-	9,843	874	1700-1800	35.0	34.9	11.3	7.7	1.0	10.2	100.0
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District : SEMPORNA

HR506	-	3,258	305	0600-0700	47.6	31.1	13.0	4.4	0.8	3.1	100.0
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District : LAHAD DATU

HR504	11,208	9,963	816	1500-1600	26.1	37.5	16.0	12.2	1.2	6.9	100.0
HR507	-	9,865	1,246	1700-1800	40.2	27.5	14.6	10.1	1.2	6.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SABAH**

SEPTEMBER 2014

District : BEAUFORT

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
HR101	-	6,716	598	1500-1600	40.9	33.0	10.0	5.4	1.2	9.5	100.0
HR105	-	4,748	375	1200-1300	49.5	23.1	9.1	2.4	1.6	14.2	100.0

District : TAMBUNAN

HR103	-	2,823	244	1300-1400	43.5	26.3	12.0	10.3	0.0	7.9	100.0
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District : TENOM

HR104	2,489	2,185	200	0900-1000	31.4	26.0	1.5	1.4	10.7	29.0	100.0
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District : SIPITANG

HR106	-	10,682	951	1300-1400	60.3	21.8	5.2	2.1	0.3	10.3	100.0
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District : PAPAR

HR201	15,750	14,532	1,308	0600-0700	54.1	25.6	7.3	3.8	0.8	8.5	100.0
HR209	-	15,479	1,483	1900-2000	44.3	24.6	12.2	8.1	3.1	7.7	100.0

District : PENAMPANG

HR202	-	4,710	429	1600-1700	40.5	25.9	13.5	9.0	1.9	9.3	100.0
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District : KOTA KINABALU

HR203	52,075	40,711	3,222	1900-2000	52.0	24.6	10.7	4.9	1.4	6.4	100.0
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District : KOTA BELUD

HR204	-	13,945	2,563	1200-1300	58.7	23.2	7.0	3.2	0.8	7.1	100.0
HR300	-	5,468	689	0700-0800	41.9	38.7	11.0	3.0	0.1	5.3	100.0

District : RANAU

HR207	-	3,790	351	1600-1700	34.3	39.4	13.5	8.9	1.9	1.9	100.0
HR208	-	3,222	287	1300-1400	36.5	38.9	10.1	8.6	2.3	3.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **SABAH**

SEPTEMBER 2014

District : KOTA MARUDU

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
HR301	-	8,567	574	1100-1200	29.7	26.3	21.3	9.8	2.3	10.5	100.0
HR302	-	6,916	528	0800-0900	26.7	25.2	24.4	10.8	2.3	10.7	100.0

District : SANDAKAN

HR403	-	15,800	1,262	1700-1800	33.7	31.0	15.7	13.7	2.8	3.2	100.0
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District : KINABATANGAN

HR404	-	6,828	745	1700-1800	34.4	36.1	11.2	13.5	1.0	3.8	100.0
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District : TAWAU

HR501	-	10,615	893	1600-1700	30.2	35.0	13.8	11.1	0.7	9.1	100.0
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District : SEMPORNA

HR506	-	2,916	268	1300-1400	50.1	29.2	12.8	4.0	0.3	3.6	100.0
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District : LAHAD DATU

HR504	8,141	7,515	632	1200-1300	20.5	42.4	14.0	15.4	1.0	6.8	100.0
HR507	-	5,532	653	1700-1800	44.3	26.1	11.0	8.6	2.9	7.0	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SABAH**

AVERAGE 2014

District : BEAUFORT

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
HR101	6,508	585	41.3	33.3	9.8	5.3	1.1	9.2	A
HR105	4,566	364	50.3	23.2	8.9	2.2	1.4	13.9	A

District : TAMBUNAN

HR103	3,018	263	45.1	26.1	11.4	9.4	0.1	8.0	A
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District : TENOM

HR104	2,378	194	30.3	26.1	1.7	1.6	11.7	28.6	A
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District : SIPITANG

HR106	11,392	1,033	49.5	18.3	5.3	2.1	0.3	24.4	B
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District : PAPAR

HR201	15,329	1,298	54.2	25.9	7.7	4.0	1.0	7.2	E
HR209	8,301	1,303	45.4	25.0	10.8	6.7	3.3	8.8	F

District : PENAMPANG

HR202	4,478	411	41.4	26.0	13.3	8.8	1.7	8.8	A
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District : KOTA KINABALU

HR203	43,647	3,615	52.8	24.3	9.8	5.0	1.2	6.9	F
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District : KOTA BELUD

HR204	11,923	1,676	58.8	24.1	7.8	2.4	0.8	6.1	F
HR300	5,084	576	42.3	38.4	11.0	3.4	0.2	4.6	A

District : RANAU

HR207	4,103	398	35.3	37.6	14.1	8.9	2.2	1.9	A
HR208	3,413	298	37.8	37.9	10.6	8.2	2.2	3.4	A

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **SABAH**

AVERAGE 2014

District : KOTA MARUDU

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
HR301	8,258	561	30.0	26.5	21.4	9.7	2.2	10.2	A
HR302	6,586	503	27.1	25.2	24.6	10.5	2.3	10.3	A

District : SANDAKAN

HR403	14,975	1,211	33.7	32.3	15.6	12.4	2.7	3.3	F
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District : KINABATANGAN

HR404	6,746	683	32.9	38.9	10.4	13.2	1.0	3.6	C
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District : TAWAU

HR501	10,229	884	32.6	35.0	12.6	9.4	0.8	9.6	D
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District : SEMPORNA

HR506	3,087	287	48.9	30.1	12.9	4.2	0.5	3.4	A
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District : LAHAD DATU

HR504	8,739	724	23.3	39.9	15.0	13.8	1.1	6.8	D
HR507	7,699	950	42.2	26.8	12.8	9.4	2.0	6.7	E

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SABAH**

District : BEAUFORT

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
HR101	5,805	7,042	10,773	7,454	4,811	4,924	5,965	5,422	5,694	6,508	-2.70	0.12
HR105	4,334	4,739	4,551	5,181	3,818	3,941	5,457	4,550	4,254	4,566	-0.01	0.00

District : TAMBUNAN

HR103	2,839	3,039	2,282	3,048	2,454	2,739	3,000	3,171	2,938	3,018	1.22	0.12
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District : TENOM

HR104	2,662	4,196	3,879	4,566	4,566	4,294	4,425	2,123	2,450	2,378	-4.80	0.22
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District : SIPITANG

HR106	4,412	4,565	5,240	5,403	6,112	6,441	6,626	5,914	7,585	11,392	8.10	0.80
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District : PAPAR

HR201	3,416	3,541	4,932	6,453	7,968	9,370	11,791	14,491	14,406	15,329	18.60	0.96
HR209	6,609	8,757	4,639	3,859	5,932	5,561	6,992	6,249	5,778	8,301	1.42	0.03

District : PENAMPANG

HR202	4,326	4,751	4,685	3,578	3,701	3,835	3,881	3,353	3,839	4,478	-1.60	0.16
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District : KOTA KINABALU

HR203	26,684	25,734	22,232	27,288	25,247	30,288	35,489	39,394	42,886	43,647	7.17	0.81
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District : KOTA BELUD

HR204	4,738	7,913	11,695	9,855	9,450	11,189	11,138	9,953	13,909	11,923	7.26	0.54
HR300	4,736	17,616	3,569	4,429	5,449	6,367	5,029	4,777	6,369	5,084	-2.70	0.04

District : RANAU

HR207	2,702	3,049	3,482	3,425	3,488	3,732	4,745	5,021	3,813	4,103	4.97	0.64
HR208	1,688	1,948	2,279	2,618	2,396	2,705	3,498	3,872	2,924	3,413	7.77	0.80

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **SABAH**

District : KOTA MARUDU

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
HR301	7,745	4,316	4,518	4,184	5,062	5,023	6,180	6,381	7,838	8,258	4.63	0.29
HR302	6,274	3,540	3,630	6,525	3,830	4,277	4,578	5,533	6,481	6,586	3.53	0.17

District : SANDAKAN

HR403	8,515	15,156	9,800	9,207	12,285	16,610	14,321	14,845	15,097	14,975	5.31	0.44
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District : KINABATANGAN

HR404	4,525	4,554	4,376	12,504	16,088	16,831	13,029	6,049	8,022	6,746	5.66	0.10
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District : TAWAU

HR501	12,948	10,938	17,009	16,860	9,407	10,074	10,035	10,455	10,327	10,229	-3.90	0.30
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District : SEMPORNA

HR506	3,339	1,670	3,231	2,485	2,663	2,711	3,074	2,742	2,704	3,087	1.52	0.05
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District : LAHAD DATU

HR504	6,795	7,140	7,423	6,987	6,781	8,294	8,691	7,641	9,407	8,739	3.15	0.66
HR507	6,831	7,820	8,170	7,168	8,600	11,141	11,633	9,706	7,831	7,699	2.22	0.14

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

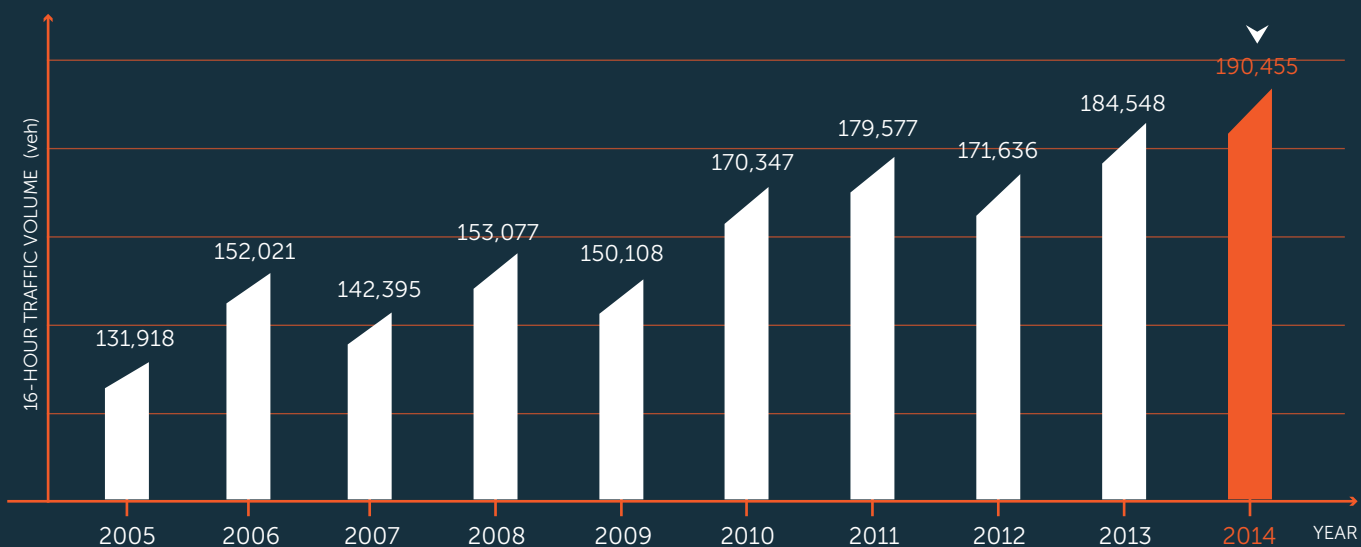


Figure 3.14-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in Sabah



There are 21 census stations in Sabah. The 16-hour traffic volume documented since year 2005 to 2014 shows a positive growth, with slight annual increase and decrease intervals through out the 10 years. The highest increase of traffic volume recorded is at 15.24% between year 2005 and 2006. There were slight interval decrease of traffic volume in 2007, 2009, and 2012. For the year 2014, the traffic growth was 3.20% increased equivalent to 5,907 compared to year 2013.

3.20%
INCREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

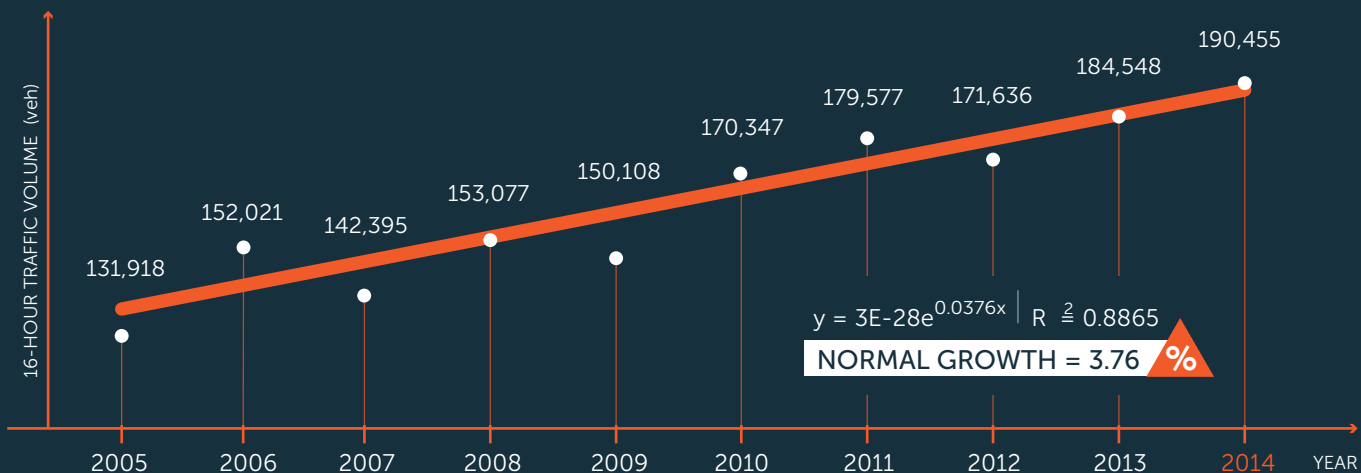


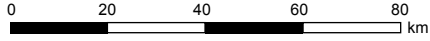
Figure 3.14-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in Sabah

Traffic growth rate recorded for the state of Sabah is 3.76% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in Sabah.

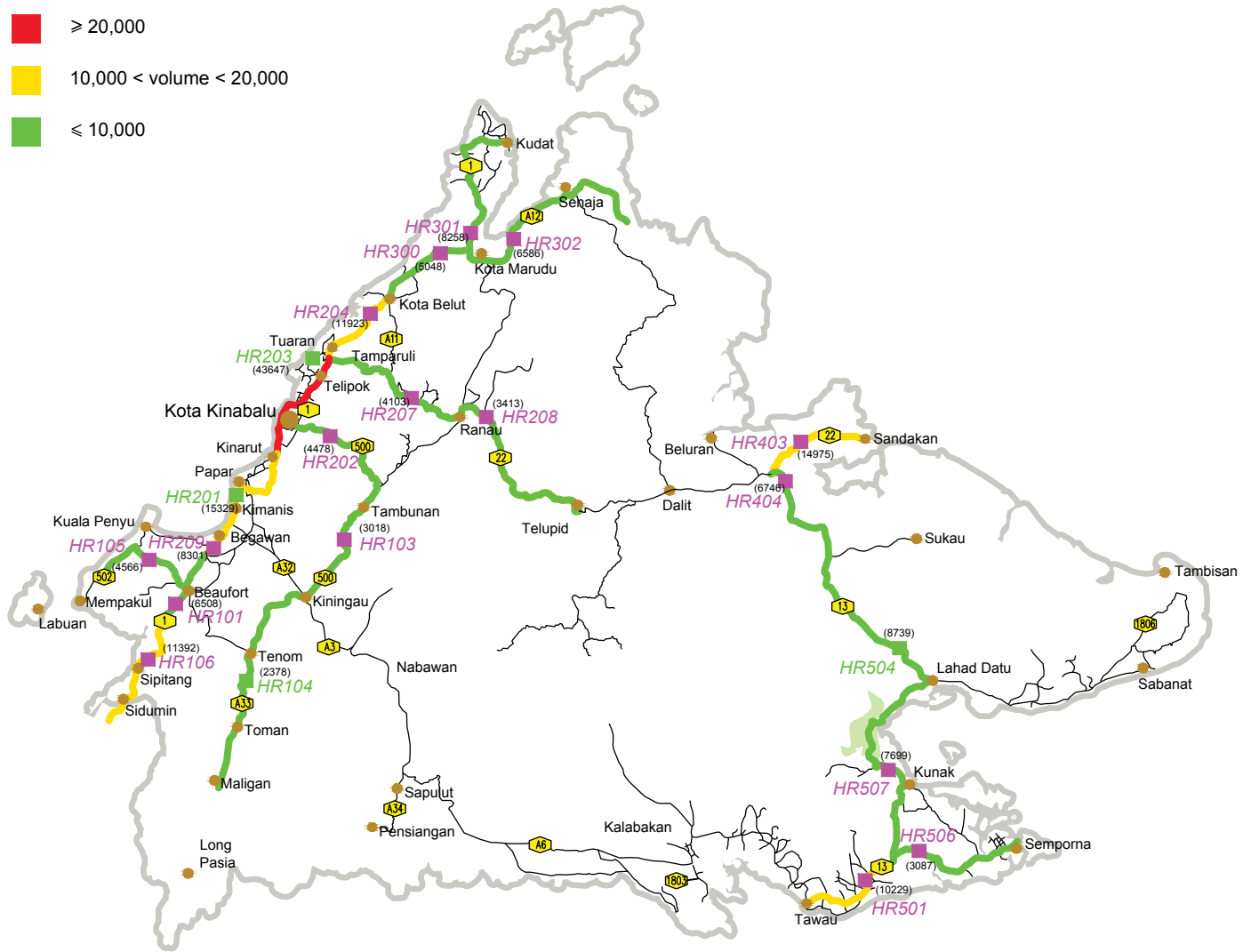
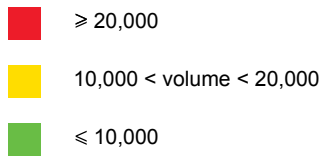
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **SABAH**

LEGEND



Traffic Volume Scale





Labuan Clock Tower

W.P. LABUAN

8 Census Stations

Road Length : **168.06 km***

Land Area : **91 km²****

Population : **85,272 people****

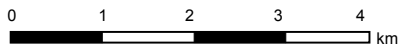
*Source : Road Facilities Maintenance Division, JKR Malaysia

**Source : Department of Statistics, Malaysia

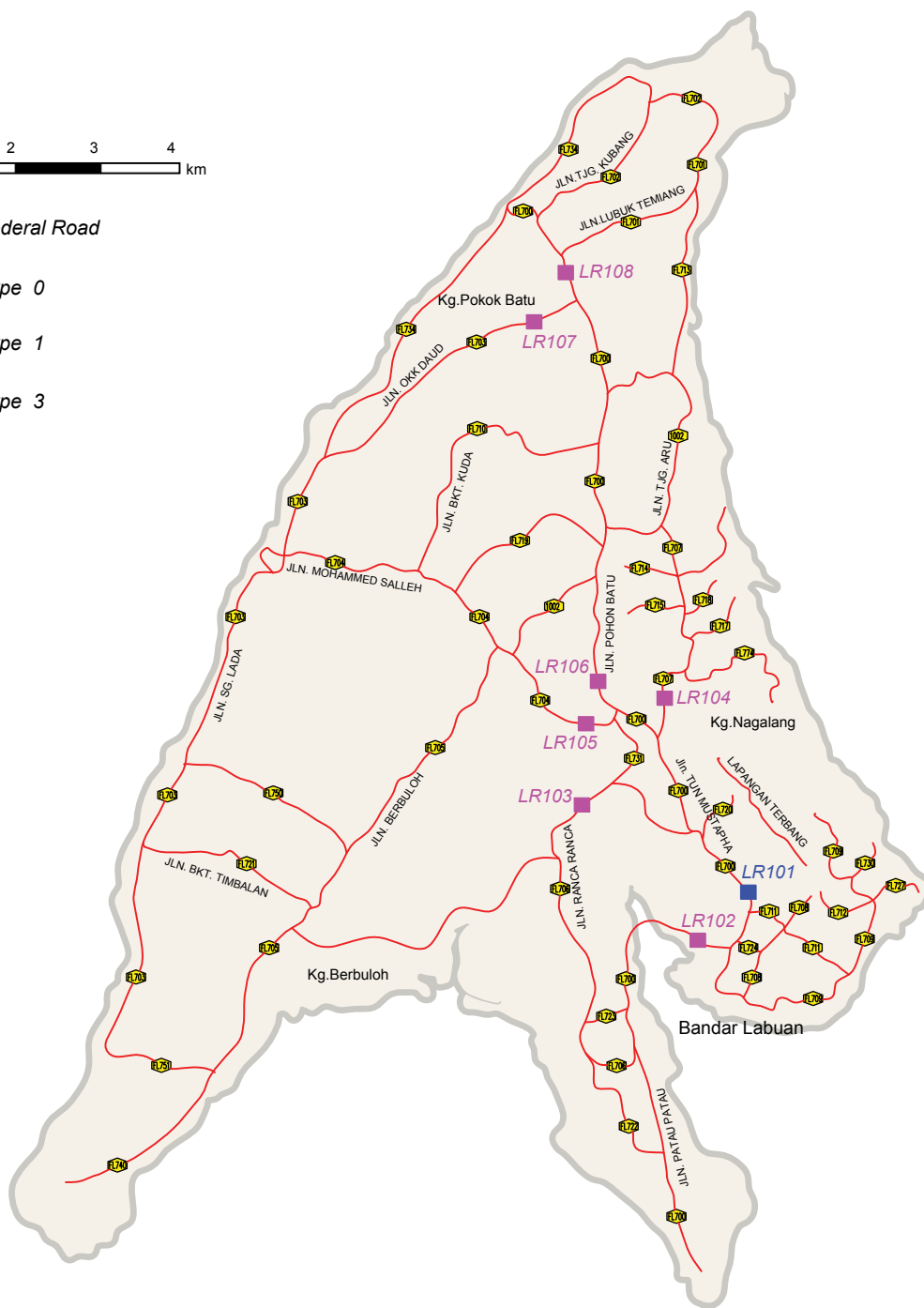
TRAFFIC CENSUS STATION MAP

STATE : **W.P. LABUAN**

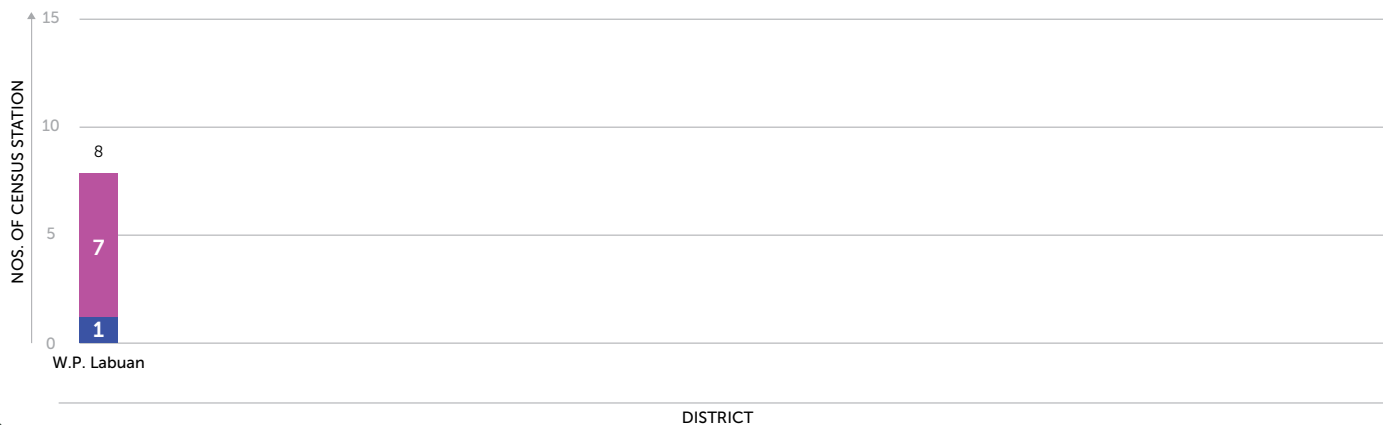
LEGEND



- Federal Road
- Type 0
- Type 1
- Type 3



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

STATE : **W.P. LABUAN**

Census Station Number	Survey Type	Route Number	KM	Description Of Location	GPS Coordinate	Carriageway	
						Type	Number of Lanes
LR101	1	L700	1.5	Jalan Tun Mustapha (1.5km from town)	N : 5° 17' 23.6" E : 115° 14' 51.2"	Dual	6
LR102	3	L700	1.4	Jalan Patau – Patau (1.4km from Jalan Tun Mustapha / Jalan Ranza – Ranza junction)	N : 5° 17' 11.4" E : 115° 14' 04.3"	Dual	4
LR103	3	L706	0.3	Jalan Ranza – Ranza (0.3km from Tun Mustapha / Jalan Ranza – Ranza junction)	N : 5° 17' 49.5" E : 115° 14' 15.8"	Single	2
LR104	3	L707	0.9	Jalan Pulau Buah (0.9km from Jalan Pulau Buah / Jalan Tun Mustapha signalized junction)	N : 5° 18' 57.8" E : 115° 14' 31.4"	Single	2
LR105	3	L704	0.3	Jalan Mohamad Salleh (0.3km from Jalan Pohon Batu / Jalan Mohamad Salleh / Jalan Tun Mustapha junction)	N : 5° 18' 35.0" E : 115° 13' 52.9"	Single	2
LR106	3	L700	0.3	Jalan Pohon Batu (0.3km from Pohon Batu / Jalan Mohamad Salleh / Jalan Tun Mustapha junction)	N : 5° 18' 42.3" E : 115° 13' 56.7"	Dual	4
LR107	3	L703	0.3	Jalan OKK Daud (0.3km from Jalan OKK Daud / Jalan Pohon Batu junction)	N : 5° 21' 28.7" E : 115° 13' 40.6"	Single	2
LR108	3	L700	6.0	KM 6 Jalan Pohon Batu (in front of Masjid Kg Ganggarak WP Labuan)	N : 5° 18' 46.6" E : 115° 13' 53.2"	Single	2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **W.P. LABUAN**

MARCH 2014

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
LR101	-	45,575	3,841	1700-1800	70.6	10.6	3.2	1.0	2.1	12.6	100.0
LR102	-	28,671	3,728	0700-0800	51.5	22.3	8.8	1.8	1.5	14.1	100.0
LR103	-	16,902	1,993	1700-1800	48.6	19.5	5.0	2.1	2.8	21.8	100.0
LR104	-	12,520	1,301	1800-1900	63.5	17.0	2.3	0.8	1.7	14.7	100.0
LR105	-	20,858	1,993	0600-0700	57.1	14.0	4.5	1.5	2.0	20.9	100.0
LR106	-	21,532	2,406	1700-1800	58.0	16.2	2.5	2.7	1.7	18.9	100.0
LR107	-	5,375	478	1400-1500	52.4	18.4	5.1	3.5	2.8	17.9	100.0
LR108	-	9,511	915	1300-1400	51.6	19.4	2.7	1.9	1.7	22.7	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

STATE : **W.P. LABUAN**

SEPTEMBER 2014

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	Total
LR101	-	45,471	3,821	1700-1800	67.9	13.7	3.5	0.7	1.7	12.6	100.0
LR102	-	30,415	3,849	0700-0800	56.4	16.4	8.3	2.6	1.7	14.6	100.0
LR103	-	11,889	1,281	1800-1900	51.9	22.4	6.0	1.6	1.2	17.0	100.0
LR104	-	14,854	1,765	1700-1800	66.0	14.3	4.6	1.5	1.4	12.2	100.0
LR105	-	20,185	2,530	0600-0700	54.3	18.2	5.3	1.7	1.3	19.1	100.0
LR106	-	21,384	2,675	0800-0900	56.6	17.6	5.3	1.7	1.3	17.6	100.0
LR107	-	5,491	660	1700-1800	55.5	15.0	4.4	1.7	2.7	20.6	100.0
LR108	-	8,138	818	1700-1800	45.8	22.1	4.7	1.1	2.0	24.2	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

STATE : **W.P. LABUAN**

AVERAGE 2014

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)						Level of Service (LOS)
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Buses	Motorcycles	
LR101	45,523	3,831	69.3	12.1	3.3	0.8	1.9	12.6	C
LR102	29,543	3,789	53.9	19.4	8.6	2.2	1.6	14.3	E
LR103	14,396	1,637	50.3	21.0	5.5	1.9	2.0	19.4	F
LR104	13,687	1,533	64.8	15.7	3.4	1.2	1.5	13.4	E
LR105	20,522	2,262	55.7	16.1	4.9	1.6	1.7	20.0	F
LR106	21,458	2,541	57.3	16.9	3.9	2.2	1.5	18.2	A
LR107	5,433	569	53.9	16.7	4.8	2.6	2.8	19.2	A
LR108	8,825	867	48.7	20.7	3.7	1.5	1.8	23.5	A

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2014

STATE : **W.P. LABUAN**

Census Station Number	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Normal Growth (%/yr)	R ²
LR101	36,661	33,651	39,336	39,218	37,854	38,889	37,905	48,329	45,086	45,523	3.00	0.66
LR102	14,425	11,562	14,494	14,489	11,148	12,162	18,000	18,215	27,587	29,543	8.74	0.60
LR103	9,324	10,234	9,561	9,183	9,225	9,045	13,533	13,740	13,764	14,396	5.42	0.66
LR104	6,012	10,079	10,840	12,080	10,314	10,562	10,102	10,913	13,462	13,687	5.43	0.52
LR105	10,302	9,648	10,836	25,713	12,303	13,991	16,586	16,656	18,451	20,522	7.09	0.44
LR106	19,990	27,777	19,215	13,143	17,822	19,046	16,920	16,934	19,011	21,458	-1.10	0.03
LR107	1,761	1,340	2,508	2,000	1,958	2,388	2,031	4,273	3,682	5,433	12.20	0.72
LR108	5,354	4,714	5,156	15,781	4,491	4,169	5,853	8,446	9,897	8,825	5.52	0.15

YEARLY 16-HOUR TRAFFIC VOLUME (2005 - 2014)

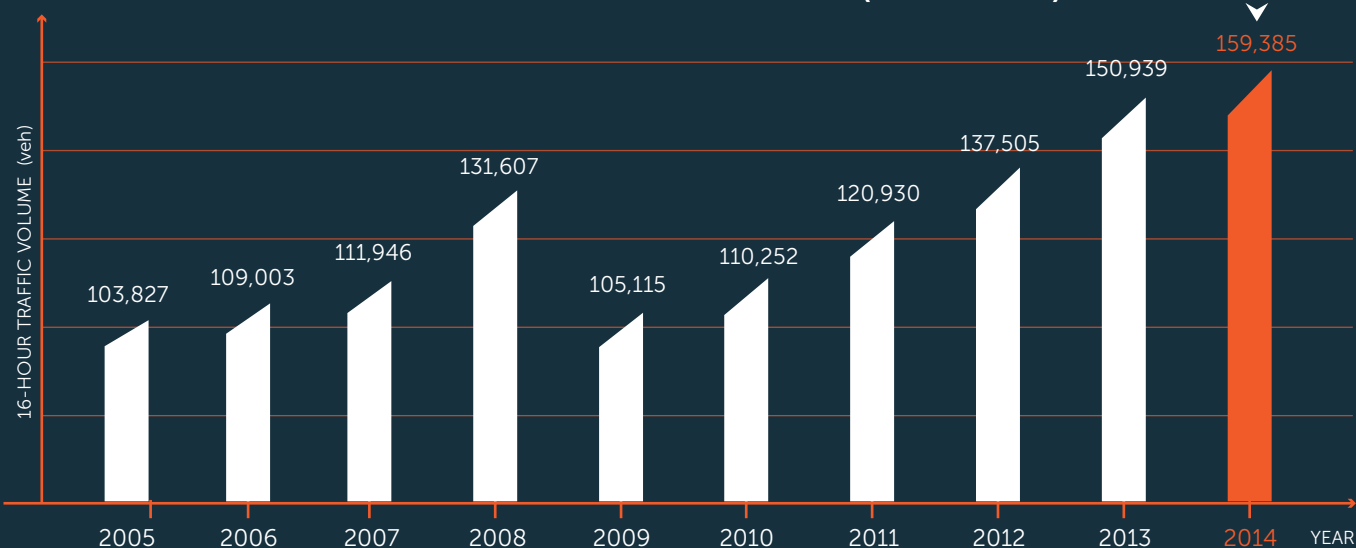


Figure 3.15-1 : Yearly 16-hour Traffic Volume (2005 - 2014) in W.P. Labuan



There are 8 census stations in W.P. Labuan. The 16-hour traffic volume documented since year 2005 to 2014 shows irregular growth in W.P. Labuan. The highest number of vehicles on the road recorded is in 2014 at 159,385 vehicles; the lowest number of vehicles on the road recorded is in 2005 at 103,827 vehicles. The traffic volume increased by 5.60% in 2014 compared to the previous year which is equivalent to 8,446 vehicles.

5.60%
INCREASE
FROM 2013

NORMAL TRAFFIC GROWTH WITH EXPONENTIAL TRENDLINE FOR THE YEAR 2014

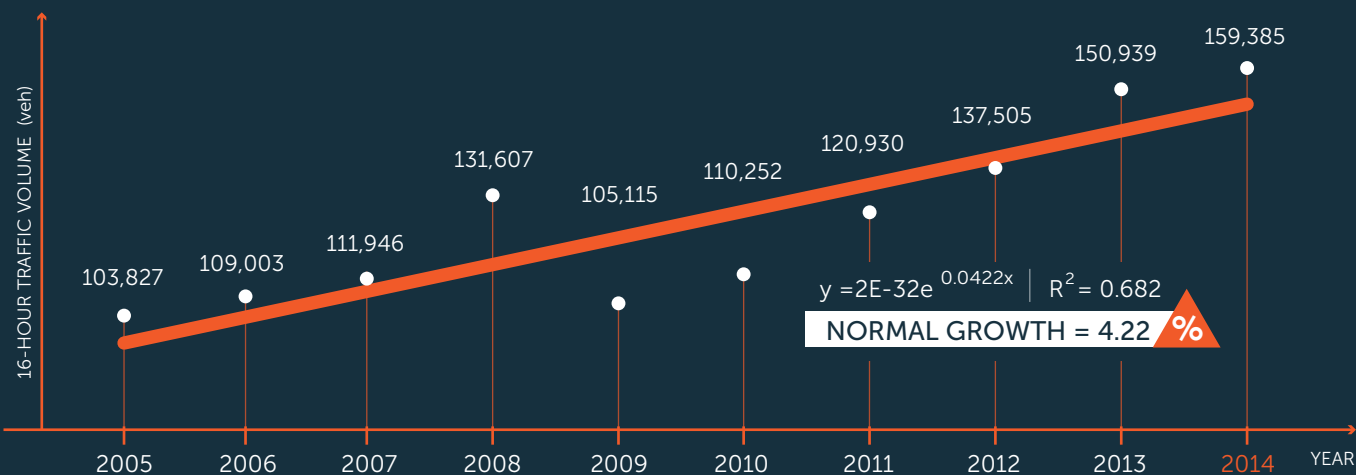


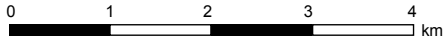
Figure 3.15-2 : Normal Traffic Growth with Exponential Trendline for the Year 2014 in W.P. Labuan

Traffic growth rate recorded for the state of W.P. Labuan is 4.22% for the year 2014. The traffic growth rate recorded is used to gauge projection of future traffic growth rate for the purpose of road planning and development of current and new roads in W.P. Labuan.

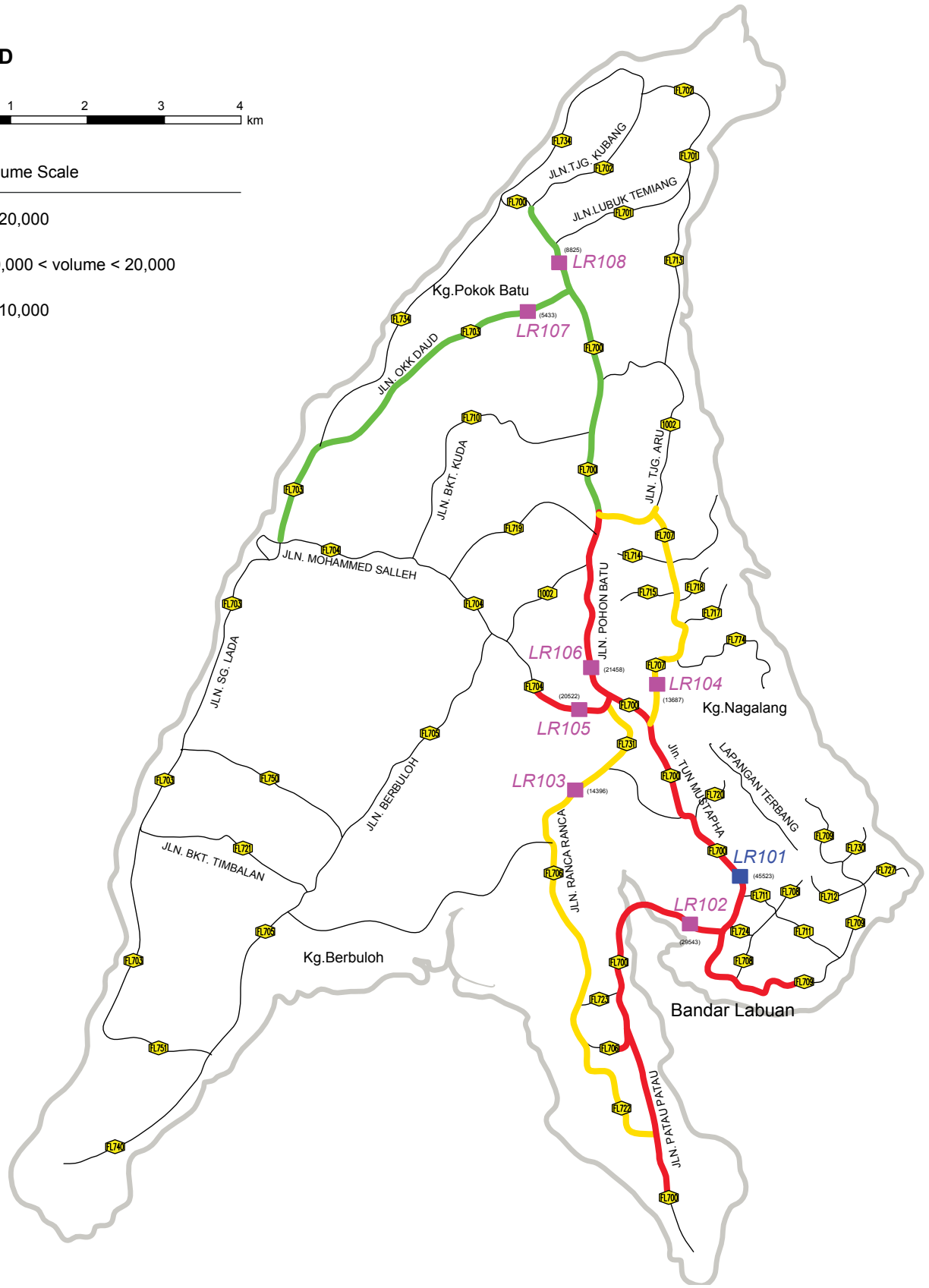
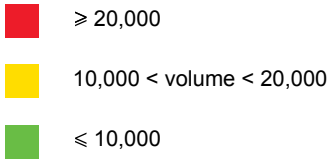
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

STATE : **W.P. LABUAN**

LEGEND



Traffic Volume Scale







TOLL EXPRESSWAY

TOLL EXPRESSWAY MAP

PENINSULAR MALAYSIA



TOLL EXPRESSWAY MAP

KLANG VALLEY



DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2014

TOLL EXPRESSWAY

STRETCH OF NORTH SOUTH EXPRESSWAY (PLUS) E1 & E2

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Closed System	914,375	40,017	37,389	15,858	12,791	1,020,429
Opened System	335,322	8,991	9,537	6,589	5,211	365,650

STRETCH OF JAMBATAN PULAU PINANG (JPP) E36

Toll Plaza	Daily Traffic								
	Class 0	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Total Traffic
Jambatan Pulau Pinang	-	15,644	57,344	3,295	2,152	190	260	93	78,978

STRETCH OF JAMBATAN PULAU PINANG (JPP2)

Toll Plaza	Daily Traffic						
	Class 0	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Jambatan Sultan Abdul Halim Mu'adzam Shah	882	10,652	450	218	72	279	12,274

STRETCH OF SECOND LINK EXPRESSWAY (LINKEDUA) E3

Toll Plaza	Daily Traffic						
	Class 0	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Tanjung Kupang	30,521	18,536	625	1,011	64	1,473	52,231
Lima Kedai	-	12,873	560	1,273	294	676	15,676
Perling	-	933	1,629	1,629	794	321	5,306

NORTH-SOUTH EXPRESSWAY CENTRAL LINK (ELITE) E6

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Closed System	164,316	6,993	6,686	12,524	1,672	192,191

STRETCH OF BUTTERWORTH KULIM EXPRESSWAY (BKE) E15

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Kubang Semang	35,386	940	980	336	407	38,050
Lunas	30,700	1,091	861	312	453	33,417

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2014

TOLL EXPRESSWAY

STRETCH OF SHAH ALAM EXPRESSWAY (KESAS) E5

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Sunway	102,455	4,733	2,679	2,507	424	112,799
Awan Besar Timur	57,309	1,756	1,061	1,534	248	61,907
Awan Besar Barat	52,836	1,704	1,050	1,617	248	57,455
Kemuning	76,678	4,744	6,182	1,543	412	89,559

STRETCH OF SPRINT EXPRESSWAY (SPRINT) E23

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Damansara	52,360	386	99	2,213	87	55,145
Pantai	86,672	875	397	2,644	187	90,776
Kiara	73,814	376	113	3,640	161	78,104

STRETCH OF DAMANSARA - PUCHONG EXPRESSWAY (LDP) E11

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Puchong Selatan	96,489	3,630	1,358	3,626	392	105,495
Puchong Barat	80,286	3,610	1,610	1,628	287	87,422
Petaling Jaya	136,672	2,399	1,222	4,409	369	145,072
Penchala	127,802	1,905	890	3,517	302	134,416

STRETCH OF SUNGAI BESI EXPRESSWAY (BESRAYA) E9

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Mines	88,353	2,925	1,217	1,623	819	94,936
Loke Yew	35,602	381	254	1,274	97	37,608

STRETCH OF KAJANG SEREMBAN HIGHWAY (LEKAS) E21

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Closed System	37,829	1,366	1,073	639	135	41,042
Opened System	15,559	533	581	248	60	16,980

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2014

TOLL EXPRESSWAY

STRETCH OF NEW PANTAI EXPRESSWAY (NPE) E10

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Pantai Dalam	95,311	950	651	4,319	284	101,516
PJS 2	54,270	671	177	2,461	327	57,906
PJS 5	30,407	254	54	1,329	83	32,127

STRETCH OF AMPANG-KUALA LUMPUR ELEVATED HIGHWAY (AKLEH) E12

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Keramat	54,237	145	37	3,384	210	58,013

STRETCH OF GUTHRIE CORRIDOR EXPRESSWAY (GUTHRIE) E35

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Bukit Jelutong	54,237	145	37	3,384	210	58,013
Elmina	31,706	1,530	1,622	422	169	35,449
Lagong	25,899	1,325	1,300	300	158	28,982

STRETCH OF KEMUNING - SHAH ALAM HIGHWAY (LKSA) E13

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Seri Muda	39,392	1,029	614	710	169	41,913
Alam Impian	22,920	1,011	312	481	116	24,840

STRETCH OF CHERAS - KAJANG HIGHWAY (GRANDSAGA) E7

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Batu 9	65,741	1,502	977	1,970	233	70,422
Batu 11	57,006	1,379	722	1,436	187	60,731

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2014

TOLL EXPRESSWAY

STRETCH OF MAJU EXPRESSWAY (MEX) E20

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Putrajaya	51,521	374	187	12,708	1,479	66,268
Salak Selatan	37,306	239	167	6,093	490	44,295

STRETCH OF JALAN DAN JEJAMBAT KUALA LUMPUR HIGHWAY (METRAMAC) E37

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
KL - Seremban	121,250	3,614	1,796	2,659	2,616	131,935

STRETCH OF NEW NORTH KLANG STRAITS BYPASS (NNKSB) E30

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Bukit Raja	58,689	3,264	1,575	836	597	64,961
Kapar	6,218	1,014	4,177	122	33	11,563
Kapar Moc (A)	1,365	197	1,145	23	14	2,743
Kapar Moc (B)	7,181	506	409	104	65	8,265

STRETCH OF BUTTERWORTH OUTER RING ROAD (BORR) E17

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Perai	12,509	195	709	645	625	14,684
Bagan Ajam	14,002	93	415	262	390	15,161
Sg. Nyior	26,730	398	963	205	172	28,469

STORMWATER MANAGEMENT AND ROAD TUNNEL (SMART) E38

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
SMART	32,732	-	-	693	-	33,425

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2014

TOLL EXPRESSWAY

STRETCH OF DUTA - ULU KELANG HIGHWAY (DUKE) E33

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Ayer Panas	40,356	485	179	1,140	137	42,296
Sentul Pasar	26,639	439	563	1,152	415	29,208
Batu	49,634	646	561	1,309	391	52,541

STRETCH OF SOUTH KLANG VALLEY EXPRESSWAY (SKVE) E26

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Closed System	28,938	1,751	2,721	351	103	33,864

STRETCH OF KAJANG DISPERSAL EXPRESSWAY (SILK) E18

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Sg. Balak	41,872	1,086	551	939	111	44,559
Sg. Ramal	78,830	1,957	1,054	1,947	535	84,324
Bukit Kajang	47,214	1,573	1,028	1,020	267	51,102
Sg. Long	22,463	782	580	348	49	24,223

STRETCH OF SENAI DESARU EXPRESSWAY (SDE) E22

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Closed System	15,512	706	1,001	312	135	17,666

STRETCH OF KL-KUALA SELANGOR EXPRESSWAY (LATAR) E25

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Ijok	13,376	392	166	170	89	14,192
Kuang	19,948	627	545	350	102	21,572
Taman Rimba Templer	15,988	691	376	279	46	17,380

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2014

TOLL EXPRESSWAY

STRETCH OF KUALA LUMPUR KARAK EXPRESSWAY (KLK) E8

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Gombak	51,107	1,702	2,244	2,493	1,391	58,937
Bentong	36,797	1,756	2,257	323	793	41,927

STRETCH OF SEREMBAN PORT DICKSON HIGHWAY (SPDH) E29

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Mambau	18,916	304	695	156	108	20,179
Lukut	3,980	123	91	61	16	4,270

STRETCH OF EAST COAST HIGHWAY (LPT) PHASE 1 E8

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Closed System	33,343	1,014	1,334	186	626	36,503

STRETCH OF JOHOR BAHRU EASTERN DISPERSAL LINK EXPRESSWAY (EDL) E14

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Bangunan Sultan Iskandar	121,250	3,614	1,796	2,659	2,616	131,935

Source : Malaysian Highway Authority

Note :

For Closed System :-

The traffic data collected are from all toll users exiting from the route.

OPEN AND CLOSED SYSTEMS

(except for Penang Bridge)



CLASS 0

- Vehicles having two axles and two wheels



CLASS 1

- Vehicles having two axles and three or four wheels (excluding taxi and bus)



CLASS 2

- Vehicles having two axles and five or six wheels (excluding bus)



CLASS 3

- Vehicles having three axles or more (excluding bus)



CLASS 4

- Taxi



CLASS 5

- Bus



CLASS 1

- Motorcycle



CLASS 2

- Motorcycle with sidecars
- Commercial vehicles in three wheels
- Cars including station wagons



CLASS 3

- Lorries and vans having two axles and four wheels
- Buses having two axles and four wheels



CLASS 4

- Lorries and vans having two axles and five or six wheels
- Buses having two axles and five or six wheels



CLASS 5

- Vehicles having three axles
- Buses having three axles



CLASS 6

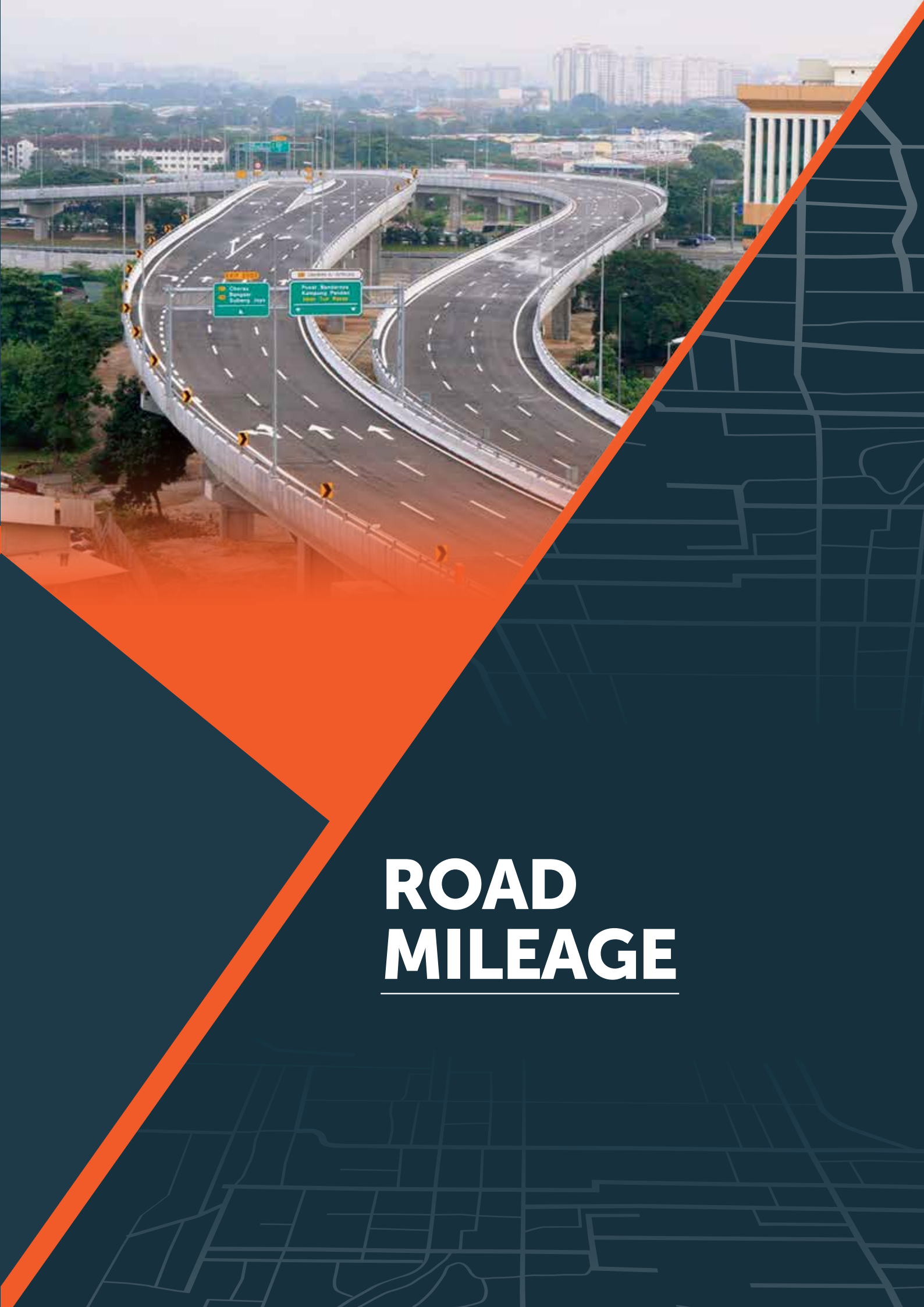
- Vehicles having four axles



CLASS 7

- Vehicles having five axles or more





ROAD MILEAGE

TOTAL ROAD MILEAGE BY YEAR (KM)

MALAYSIA

YEAR **1955 - 2014**

Year	FEDERAL ROAD			STATE ROAD			TOTAL OF ROAD MILEAGE		
	Paved	Unpaved	Total	Paved	Unpaved	Total	Paved	Unpaved	Total
1955	3,334.34	382.86	3,717.20	4,706.46	1,982.44	6,688.90	8,040.80	2,365.30	10,406.10
1956	3,115.14	385.60	3,500.74	5,067.02	1,879.96	6,946.98	8,182.16	2,265.56	10,447.72
1957	3,379.82	218.35	3,598.17	5,044.76	1,917.59	6,962.35	8,424.58	2,135.94	10,560.52
1958	3,783.11	249.20	4,032.31	4,787.82	1,903.63	6,691.45	8,570.93	2,152.83	10,723.76
1959	3,820.42	180.82	4,001.24	4,980.15	1,945.30	6,925.45	8,800.57	2,126.12	10,926.69
1960	3,879.58	163.99	4,043.57	5,183.62	1,930.68	7,114.30	9,063.20	2,094.67	11,157.87
1961	3,844.02	192.73	4,036.75	5,324.59	1,928.30	7,252.89	9,168.61	2,121.03	11,289.64
1962	3,897.50	203.86	4,101.36	5,873.57	2,375.97	8,249.54	9,771.07	2,579.83	12,350.90
1963	3,967.75	148.93	4,116.68	6,283.31	2,468.40	8,751.71	10,251.06	2,617.33	12,868.39
1964	4,005.63	232.95	4,238.58	6,899.82	2,590.23	9,490.05	10,905.45	2,823.18	13,728.63
1965	4,262.67	325.74	4,588.41	7,391.01	2,569.04	9,960.05	11,653.68	2,894.78	14,548.46
1966	4,335.36	354.02	4,689.38	7,750.56	2,535.23	10,285.79	12,085.92	2,889.25	14,975.17
1967	4,417.52	438.69	4,856.21	8,182.25	2,400.65	10,582.90	12,599.77	2,839.34	15,439.11
1968	4,522.49	413.27	4,935.76	8,599.01	2,417.16	11,016.17	13,121.50	2,830.43	15,951.93
1969	4,559.12	393.29	4,952.41	8,900.10	2,371.76	11,271.86	13,459.22	2,765.05	16,224.27
1970	4,612.22	384.56	4,996.78	9,161.37	2,264.67	11,426.04	13,773.59	2,649.23	16,422.82
1971	4,689.19	356.33	5,045.52	9,438.03	2,068.93	11,506.96	14,127.22	2,425.26	16,552.48
1972	4,714.11	439.59	5,153.70	9,794.34	2,083.42	11,877.76	14,508.45	2,523.01	17,031.46
1973	4,717.90	424.85	5,142.75	10,102.72	2,007.99	12,110.71	14,820.62	2,432.84	17,253.46
1974	4,706.81	447.66	5,154.47	10,351.43	2,130.75	12,482.18	15,058.24	2,578.41	17,636.65
1975	4,716.82	535.41	5,252.23	10,576.38	2,133.75	12,710.13	15,293.20	2,669.16	17,962.36
1976	4,797.60	751.74	5,549.34	10,906.13	2,508.06	13,414.19	15,703.73	3,259.80	18,963.53
1977	4,845.47	810.88	5,656.35	11,332.67	2,671.10	14,003.77	16,178.14	3,481.98	19,660.12
1978	4,921.10	1,005.37	5,926.47	11,455.15	2,788.49	14,243.64	16,376.25	3,793.86	20,170.11
1979	4,939.23	1,087.57	6,026.80	12,036.23	2,624.90	14,661.13	16,975.46	3,712.47	20,687.93
1980	5,268.67	1,107.90	6,376.57	12,586.87	2,950.95	15,537.82	17,855.54	4,058.85	21,914.39
1981	5,386.14	1,264.22	6,650.36	12,816.61	3,318.93	16,135.54	18,202.75	4,583.15	22,785.90
1982	6,484.45	1,621.50	8,105.95	13,634.77	3,800.96	17,435.73	20,119.22	5,422.46	25,541.68
1983	6,505.53	1,894.76	8,400.29	13,928.52	4,225.13	18,153.65	20,434.05	6,119.89	26,553.94
1984	7,060.03	2,117.33	9,177.36	14,059.36	3,996.90	18,056.26	21,119.39	6,114.23	27,233.62
1985	7,231.30	2,299.45	9,530.75	17,867.06	11,472.10	29,339.16	25,098.36	13,771.55	38,869.91
1986	8,531.85	3,632.26	12,164.11	22,763.82	4,141.55	26,905.37	31,295.67	7,773.81	39,069.48
1987	9,994.03	2,331.08	12,325.11	22,972.72	4,034.59	27,007.31	32,966.75	6,365.67	39,332.42
1988	9,436.96	3,729.04	13,166.00	25,624.24	13,799.07	39,423.31	35,061.20	17,528.11	52,589.31
1989	10,310.21	2,749.96	13,060.17	24,293.96	13,761.15	38,055.11	34,604.17	16,511.11	51,115.28
1990	10,330.40	2,730.50	13,060.90	27,448.30	13,475.20	40,923.50	37,778.70	16,205.70	53,984.40
1991	12,623.10	1,639.70	14,262.80	27,448.20	14,026.60	41,474.80	40,071.30	15,666.30	55,737.60
1992	12,972.40	1,368.90	14,341.30	29,162.67	13,987.69	43,150.36	42,135.07	15,356.59	57,491.66
1993	13,589.95	960.19	14,550.14	30,710.20	14,497.26	45,207.46	44,300.15	15,457.45	59,757.60
1994	13,759.77	990.50	14,750.27	31,743.31	14,713.71	46,457.02	45,503.08	15,704.21	61,207.29
1995	13,846.57	990.50	14,837.07	31,743.31	14,713.71	46,457.02	45,589.88	15,704.21	61,294.09
1996	14,423.75	961.42	15,385.17	32,731.64	15,266.32	47,997.96	47,155.39	16,227.74	63,383.13
1997	14,749.16	961.42	15,710.58	33,920.85	15,349.20	49,270.05	48,670.01	16,310.62	64,980.63
1998	15,141.98	938.91	16,080.89	34,187.41	15,283.33	49,470.74	49,329.39	16,222.24	65,551.63
1999	15,350.50	855.42	16,205.92	34,561.22	15,110.21	49,671.43	49,911.72	15,965.63	65,877.35
2000	15,920.50	855.42	16,775.92	35,845.39	14,969.15	50,814.54	51,765.89	15,824.57	67,590.46
2001	16,001.08	855.42	16,856.50	41,135.32	15,025.76	56,161.08	57,136.40	15,881.18	73,017.58
2002	16,128.53	855.42	16,983.95	41,457.35	14,961.68	56,419.03	57,585.88	15,817.10	73,402.98
2003	16,461.09	908.18	17,369.27	44,285.08	16,778.99	61,064.07	60,746.17	17,687.17	78,433.34
2004	17,737.86	356.99	18,094.85	43,337.47	18,082.85	61,420.32	61,075.32	18,439.84	79,515.16
2005	17,451.75	313.18	17,764.93	51,888.69	18,860.87	70,749.56	69,340.44	19,174.05	88,514.49
2006	17,508.80	256.18	17,764.98	55,272.55	18,582.07	73,854.62	72,781.35	18,838.25	91,619.60
2007	17,758.99	256.18	18,015.17	55,272.55	18,582.07	73,854.62	73,031.54	18,838.25	91,869.79
2008	18,146.37	10.40	18,156.77	55,272.58	18,582.12	73,854.70	73,418.95	18,592.52	92,011.47
2009	18,570.33	10.40	18,580.73	81,432.12	24,642.99	106,075.12	100,002.45	24,653.39	124,655.85
2010	18,920.07	0.00	18,920.07	92,457.46	25,841.96	118,299.42	111,377.53	25,841.96	137,219.49
2011	19,216.24	0.00	19,216.24	108,300.72	29,650.26	137,950.98	127,516.96	29,650.26	157,167.22
2012	19,427.51	0.00	19,427.51	123,584.82	39,686.97	163,271.79	143,012.33	39,686.97	182,699.30
2013	19,461.79	0.00	19,461.79	138,543.39	46,164.95	184,708.34	158,005.18	46,164.95	204,170.13
2014	19,714.22	0.00	19,714.22	134,979.44	49,094.36	184,073.80	154,693.66	49,094.36	203,788.02

Source : Road Facilities Maintenance Division, JKR Malaysia

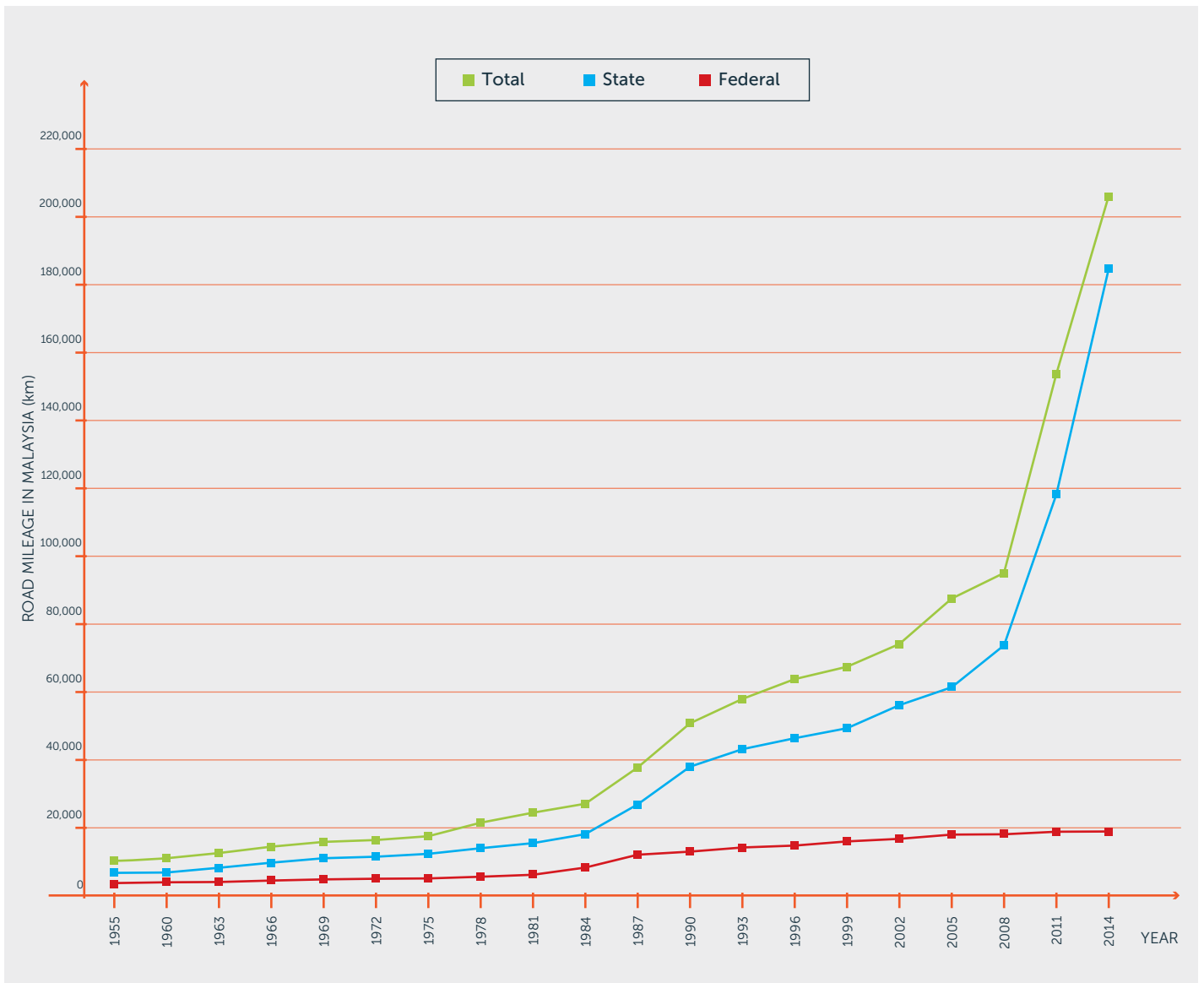


Figure 5-1: Road Mileage in Malaysia by Year (1955 - 2014)

Figure 5-1 shows the summary of road mileage for both State and Federal Roads in Malaysia, from year 1955 to 2014. For both State and Federal Roads, road mileage recorded a slow growth from the year 1955 to 1984. However, rapid growth started to show the year after, with 922% increase between year 1987 to 2014. Meanwhile, road mileage for federal roads maintained below 20,000 km until 2014.

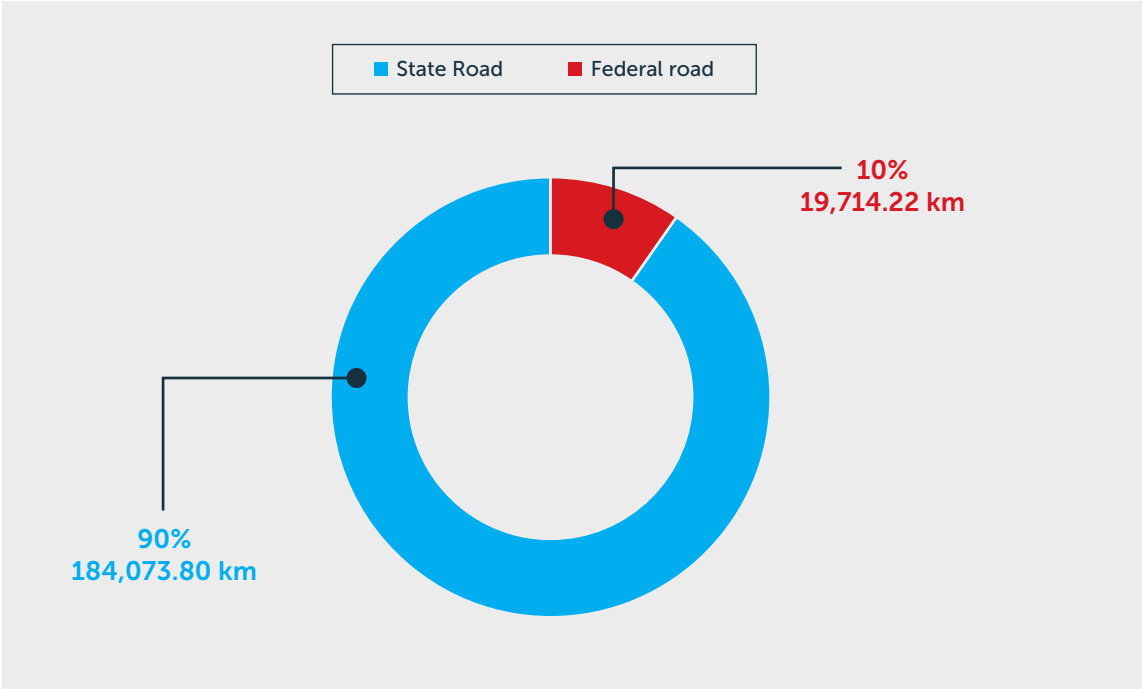


Figure 5-2: Distribution of Federal and State Road in Malaysia

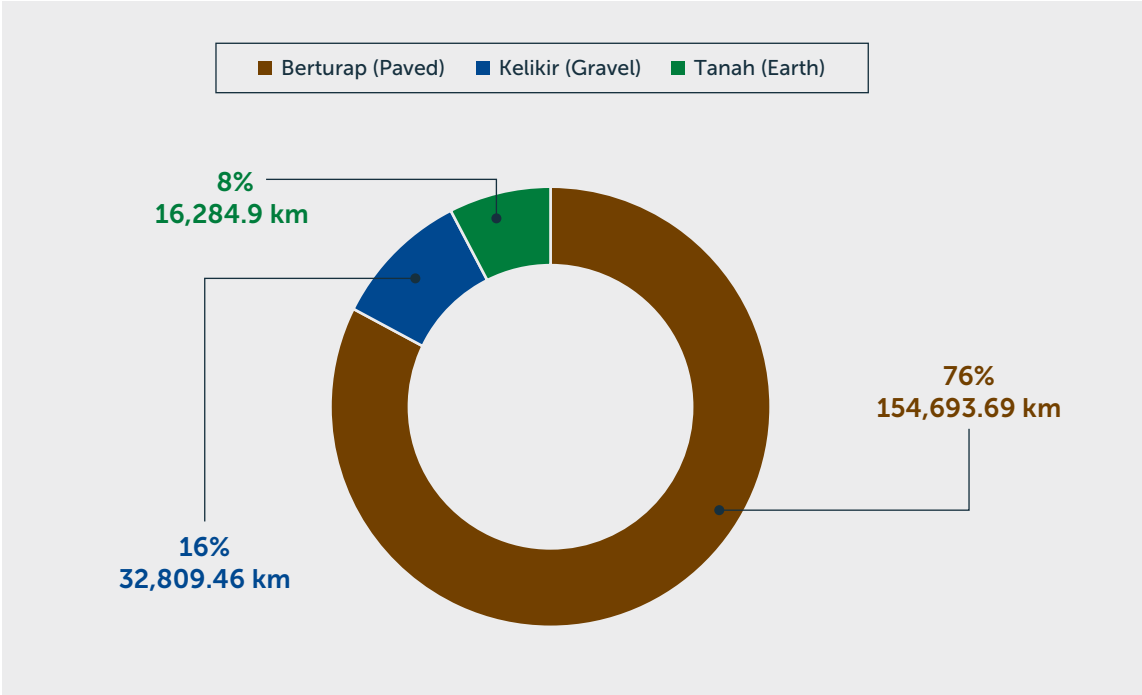


Figure 5-3: Distribution of Pavement Types in Federal and State Road in Malaysia

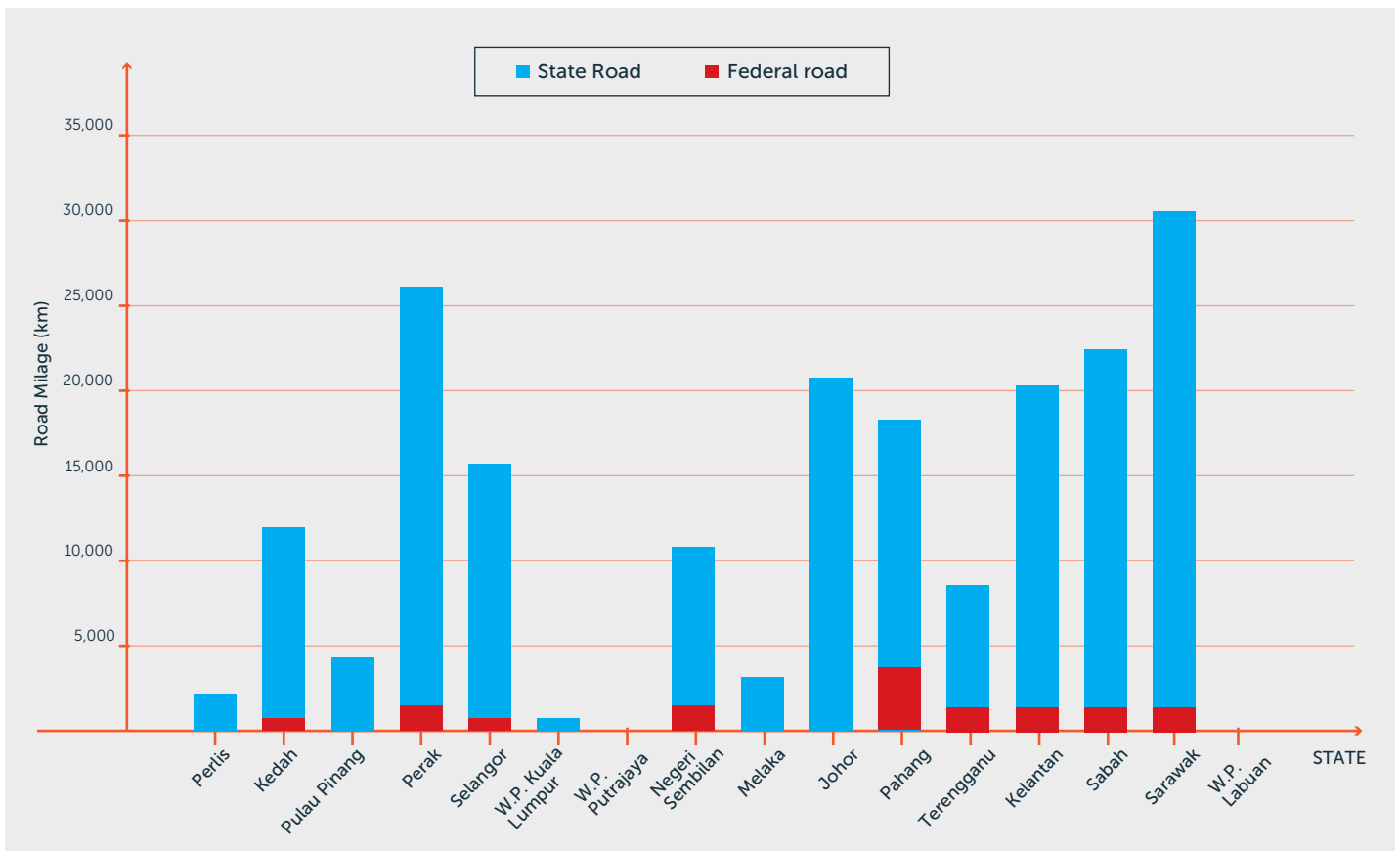


Figure 5-4 : Distribution of Federal and State Road Network by State in Malaysia

Federal Road can be categorized as Main Federal Roads, FELDA/ FELCRA Federal Roads, Road to Main Federal Institutions, Road to Industrial Area, Road to the Regional Development, Main Federal Roads in Sabah, Sarawak & WP Labuan and Toll Expressways & Toll Highways.

State Road can be categorized as Main State Road, Municipal Roads, Low-Cost Housing Area Roads, Back Alley, Agricultural Road, Rural Roads and Tourist Island Roads.

The total mileage ratio of the Federal Road to the State Road is 1:9 as shown in Figure 5-2. While, as shown in Figure 5-4, Sarawak have the highest total road mileage in Malaysia which include 1,423.79km of Federal Road and 29,417.232km of State Road which is also the highest of State Road mileage. Meanwhile, Perak have the highest total road mileage in Peninsular Malaysia which include 1,516.37km of Federal Road and 25,004.731km of State Road. The highest of Federal Road mileage is in Pahang which is 3,845.77km. Most of the road is asphalt and concrete pavement (76%), follows by gravel (16%) and earth (8%) as shown in Figure 5-3.

TOTAL ROAD MILEAGE BY STATE (KM)

MALAYSIA

YEAR 2014

STATE	FEDERAL ROAD				STATE ROAD				TOTAL			TOTAL
	Paved	Unpaved		Total	Paved	Unpaved		Total	Paved	Unpaved		
		Gravel	Earth			Gravel	Earth			Gravel	Earth	
Johor	2,368.68	0.00	0.00	2,368.68	18,439.03	451.89	328.42	19,219.33	20,807.71	451.89	328.42	21,588.01
Melaka	312.77	0.00	0.00	312.77	2,795.38	179.30	22.82	2,997.50	3,108.15	179.30	22.82	3,310.27
N. Sembilan	1,382.58	0.00	0.00	1,382.58	9,725.28	299.59	408.89	10,433.76	11,107.85	299.59	408.89	11,816.33
Selangor	968.57	0.00	0.00	968.57	13,356.93	949.22	879.57	15,185.71	14,325.49	949.22	879.57	16,154.28
Perak	1,516.37	0.00	0.00	1,516.37	14,029.76	9,188.97	1,786.01	25,004.73	15,546.13	9,188.97	1,786.01	26,521.10
P. Pinang	190.04	0.00	0.00	190.04	3,101.60	894.78	62.19	4,058.58	3,291.64	894.78	62.19	4,248.62
Kedah	1,102.55	0.00	0.00	1,102.55	10,312.51	850.31	249.81	11,412.63	11,415.06	850.31	249.81	12,515.18
Perlis	247.25	0.00	0.00	247.25	1,247.09	267.65	213.80	1,728.54	1,494.34	267.65	213.80	1,975.78
Pahang	3,845.77	0.00	0.00	3,845.77	12,511.99	2,152.67	602.36	15,267.02	16,357.76	2,152.67	602.36	19,112.79
Terengganu	1,275.71	0.00	0.00	1,275.71	5,978.18	1,039.93	657.17	7,675.28	7,253.88	1,039.93	657.17	8,950.99
Kelantan	1,311.23	0.00	0.00	1,311.23	15,318.15	2,613.45	1,374.47	19,306.06	16,629.37	2,613.45	1,374.47	20,617.29
W.P. Kuala Lumpur	22.45	0.00	0.00	22.45	1,489.67	19.08	0.00	1,508.75	1,512.12	19.08	0.00	1,531.20
W.P. Putrajaya	149.59	0.00	0.00	149.59	0.00	0.00	0.00	0.00	149.59	0.00	0.00	149.59
SUBTOTAL	14,693.54	0.00	0.00	14,693.54	108,305.56	18,906.82	6,585.51	133,797.88	122,999.09	18,906.82	6,585.51	148,491.42
Sabah	1,501.84	0.00	0.00	1,501.84	9,305.38	10,112.38	1,371.07	20,788.83	10,807.22	10,112.38	1,371.07	22,290.67
Sarawak	1,423.79	0.00	0.00	1,423.79	17,298.65	3,790.26	8,328.32	29,417.23	18,722.44	3,790.26	8,328.32	30,841.02
W.P. Labuan	98.20	0.00	0.00	98.20	69.86	0.00	0.00	69.86	168.06	0.00	0.00	168.06
SUB TOTAL	3,023.83	0.00	0.00	3,023.83	26,673.88	13,902.65	9,699.39	50,275.92	29,697.71	13,902.65	9,699.39	53,299.75
Lebuhraya Bertol	1,996.85	0.00	0.00	1,996.85	0.00	0.00	0.00	0.00	1,996.85	0.00	0.00	1,996.85
TOTAL	19,714.22	0.00	0.00	19,714.22	134,979.44	32,809.46	16,284.90	184,073.80	154,693.66	32,809.46	16,284.90	203,788.02

- Note :
1. Federal Road Planning according to Federal Road Gazette 31.12.2014
 2. State Road Planning as registered in MARRIS until 6.1.2015
 3. Putrajaya Federal Road is under Putrajaya Corporation

Source : Road Facilities Maintenance Division, JKR Malaysia



VEHICLE REGISTRATION

TOTAL CUMULATIVE OF NEW REGISTRATION OF MOTOR VEHICLES

MALAYSIA

UNTIL 31 DECEMBER 2014

By Type of Vehicle

Year	Motorcycle	Car	Taxi	Bus	Lorry & Van	Hire Car	Trailer	Other	Total
1986	2,522,173	1,419,542	23,973	21,222	306,980	3,947	26,467	115,645	4,439,949
1987	2,611,396	1,479,871	24,628	21,901	319,114	3,810	26,625	113,039	4,600,384
1988	2,702,932	1,549,600	25,132	23,346	328,594	4,154	26,503	122,655	4,782,916
1989	2,848,717	1,658,567	26,078	24,828	349,737	4,725	26,807	132,327	5,071,786
1990	3,035,930	1,811,160	28,811	26,803	380,330	5,666	27,348	146,730	5,462,778
1991	3,251,289	1,970,934	31,842	28,229	411,149	6,181	27,998	159,554	5,887,176
1992	3,473,643	2,107,005	34,178	30,013	442,401	6,791	28,744	172,733	6,295,508
1993	3,703,838	2,255,420	36,458	33,358	466,871	7,586	29,077	179,871	6,712,479
1994	3,977,047	2,426,546	40,088	34,771	495,736	10,279	28,788	196,834	7,210,089
1995	3,564,756	2,532,396	27,276	35,224	430,716	28,969	-	183,038	6,802,375
1996	3,951,931	2,886,536	49,485	38,965	512,165	9,971	-	237,631	7,686,684
1997	4,328,997	3,271,304	51,293	43,444	574,622	10,826	-	269,983	8,550,469
1998	4,692,183	3,452,852	45,643	54,590	599,149	10,142	-	269,983	9,124,542
1999	5,082,473	3,787,047	55,626	47,674	642,976	10,020	-	304,135	9,929,951
2000	5,356,604	4,145,982	56,152	48,662	665,284	10,433	-	315,687	10,598,804
2001	5,592,150	4,528,490	56,464	49,669	688,367	10,053	-	327,369	11,252,562
2002	5,825,960	4,974,850	57,920	51,008	711,738	10,107	-	344,058	11,975,641
2003	6,164,958	5,428,774	60,723	52,846	740,482	10,210	-	361,275	12,819,268
2004	6,572,366	5,911,752	65,008	54,997	772,218	10,661	-	377,835	13,764,837
2005	7,021,117	6,370,046	69,645	57,036	807,895	13,075	-	397,536	14,736,350
2006	7,458,128	6,941,996	70,409	59,991	836,579	11,638	-	411,991	15,790,732
2007	7,943,364	7,419,643	72,374	62,308	871,234	12,368	-	432,652	16,813,943
2008	8,486,486	7,956,735	76,307	63,645	914,967	16,811	-	455,595	17,970,546
2009	8,929,386	8,470,689	80,417	65,609	949,698	18,946	-	474,517	18,989,262
2010	9,427,427	9,055,993	85,443	67,676	990,585	22,223	-	497,987	20,147,334
2011	9,969,735	9,650,603	90,390	70,081	1,030,303	25,791	-	522,430	21,359,333
2012	10,511,122	10,314,938	96,158	72,341	1,074,008	30,782	-	541,920	22,641,269
2013	11,087,878	10,534,575	99,921	62,784	1,116,167	53,954	-	863,516	23,818,795
2014	11,629,265	11,199,910	105,689	65,044	1,159,872	58,945	-	882,467	25,101,192

Source : Road Transport Department of Malaysia

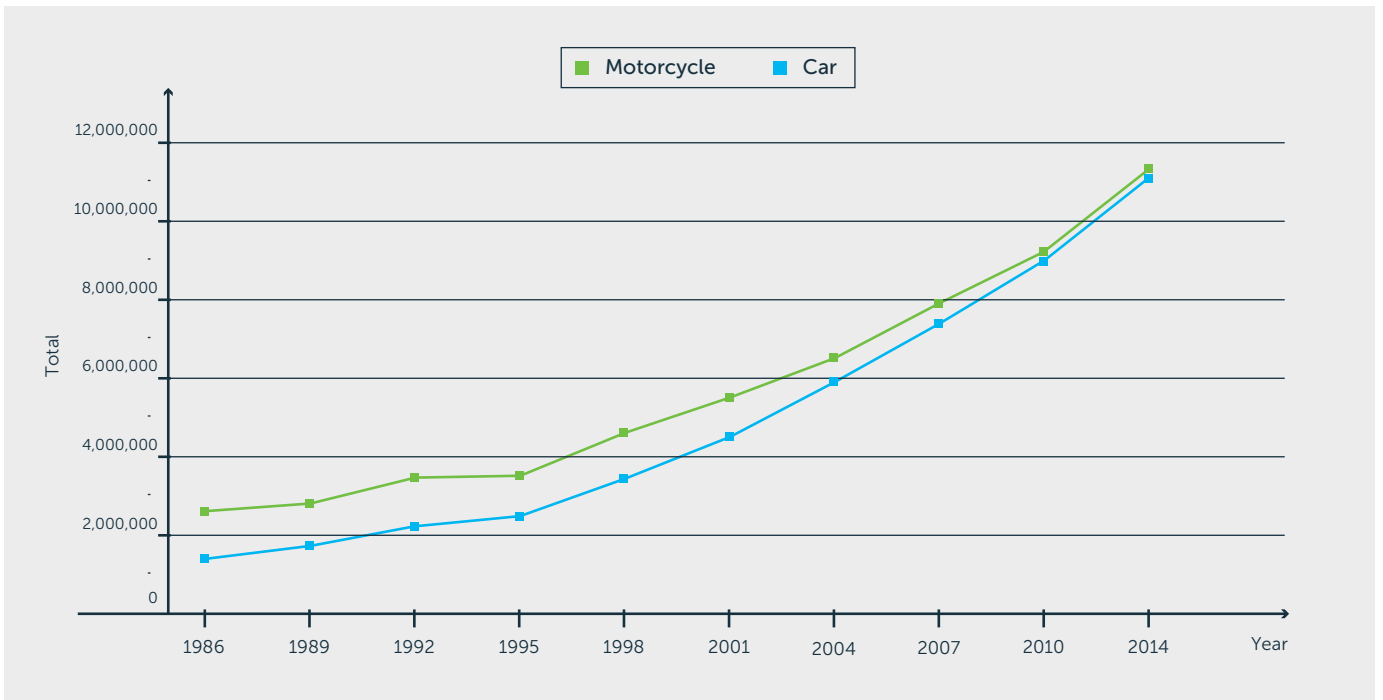


Figure 6-1: Total Cumulative of New Registration of Motor Vehicles for Motorcycle and Car in Malaysia Until 2014

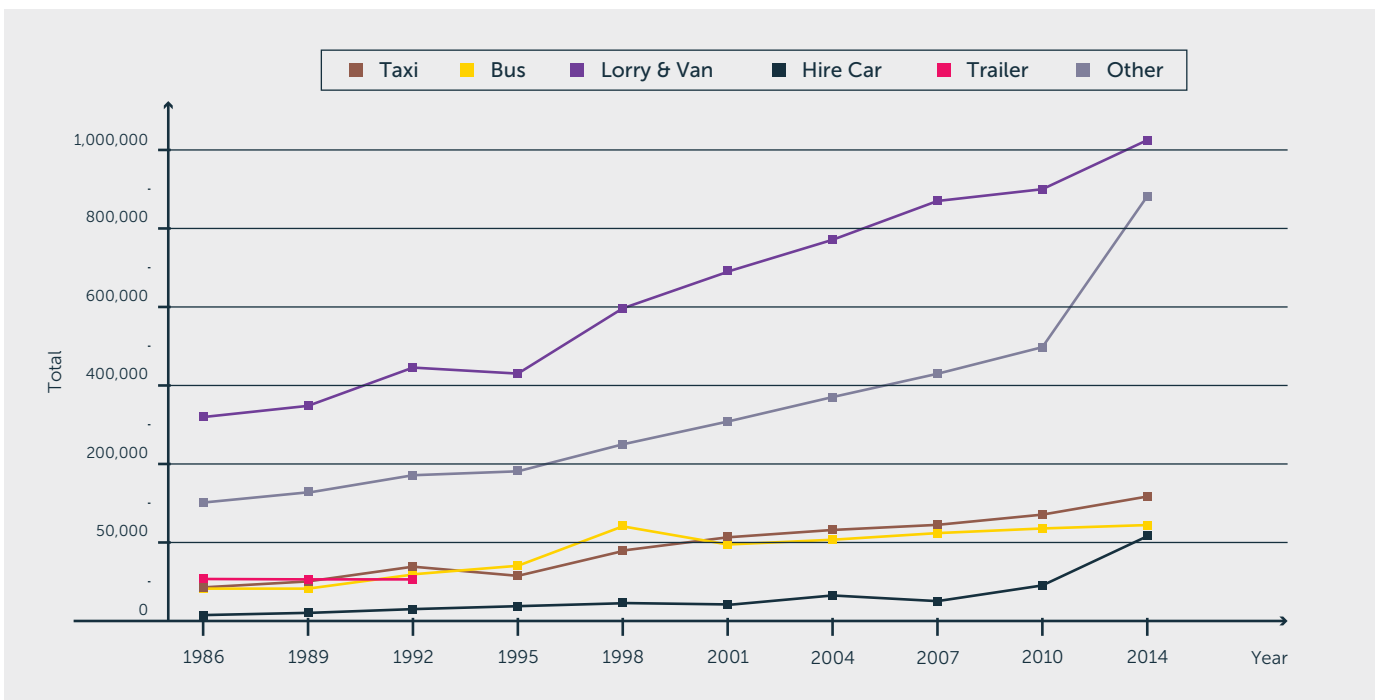


Figure 6-2: Total Cumulative of New Registration of Motor Vehicles for Taxi, Bus, Lorry & Van, Hire Car, Trailer and Other Vehicle in Malaysia Until 2014

Figure 6-1 and 6-2 show the total cumulative of new registration of motor vehicles for cars, taxis, buses, lorries and vans, hire cars, trailers and others for the years between 1986 to 2014. The highest increase are motorcycles, whereas the lowest are trailers. Three types of vehicles - hire car, taxi and bus - although continued to increase, did not exceed 200, 000 units from the year 1986 until year 2014. Meanwhile, cars and motorcycles registered until 2014 almost reached 12, 000, 000 units.

TOTAL CUMULATIVE OF MOTOR VEHICLES

MALAYSIA

UNTIL **31 DECEMBER 2014**

By State And Type of Vehicle

Type of Vehicle	Private Vehicle		Public Vehicle			Lorry & Van	Other	Total
	Motorcycle	Car	Bus	Taxi	Hire Car			
Perlis	73,621	22,833	175	126	79	1,982	2,266	101,082
Kedah	853,278	314,324	2,940	2,319	1,370	38,957	30,499	1,243,687
Pulau Pinang	1,311,249	1,064,250	5,006	3,713	1,685	75,364	38,953	2,500,220
Perak	1,274,019	726,350	4,601	3,664	878	73,723	59,404	2,142,639
Selangor	1,273,286	1,068,420	6,460	14,647	1,990	181,434	133,718	2,679,955
Wilayah Persekutuan	1,707,324	3,633,331	18,144	54,057	41,905	258,614	236,110	5,949,485
Negeri Sembilan	514,775	322,283	2,460	1,933	564	46,899	16,310	905,224
Melaka	433,604	322,338	1,673	1,554	431	27,443	13,709	800,752
Johor	1,722,944	1,397,582	8,482	12,370	2,754	145,404	96,188	3,385,724
Pahang	548,213	359,248	1,953	1,888	982	45,220	28,536	986,040
Terengganu	354,736	196,226	1,042	925	327	21,994	13,414	588,664
Kelantan	502,917	285,542	1,980	1,521	587	29,343	16,572	838,462
Sabah	338,902	591,868	7,042	4,566	3,779	121,021	98,123	1,165,301
Sarawak	720,395	723,701	3,086	2,405	1,606	92,119	98,639	1,641,951
Total	11,629,265	11,199,910	65,044	105,689	58,945	1,159,872	882,467	25,101,192

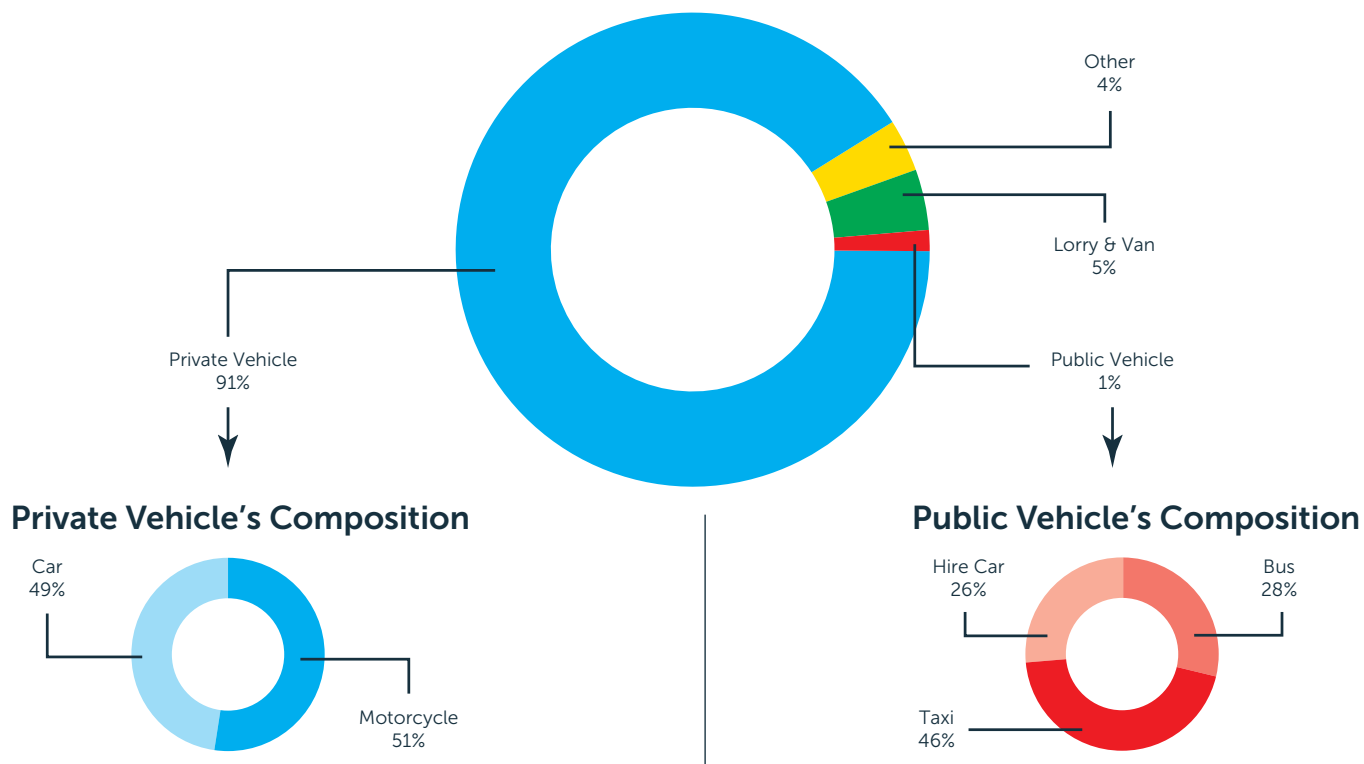


Figure 6-3 : Accumulated Motor Vehicles In Malaysia Until 31 Desember 2014

As recorded until 31 December 2014, the total accumulated motor vehicles in Malaysia are 25,101,192 vehicles. The total accumulated motor vehicles increased 5.4% in the year 2014. The motor vehicles can be categorized as Private Vehicle, Public Vehicle, Lorry & Van and Others. As shown in Figure 6-3, the composition of the 2014 accumulated motor vehicles are Private Vehicle 91%, Public Vehicle 1%, Lorry & Van 5% and Other 4%. The Private Vehicle includes 11,629,265 motorcycles and 11,199,910 cars. While the Public Vehicle includes 65,044 busses, 105,689 taxis and 58,945 hire cars. Part of the Road Transport Department Malaysia's mission is to regulate all these motor vehicles safely and efficiently through efficient, reputable and high technology enforcement and service deliveries to meet the nation and customer needs.

By State And Type of Vehicle

Type of Vehicle State	Private Vehicle		Public Vehicle			Lorry & Van	Other	Total
	Motorcycle	Car	Bus	Taxi	Hire Car			
Perlis	4,603	1,604	2	0	0	33	24	6,266
Kedah	40,987	13,456	36	21	25	955	489	55,969
Pulau Pinang	47,203	40,053	267	201	65	2,973	743	91,505
Perak	41,577	26,699	174	11	25	2,273	1,053	71,812
Selangor	70,813	31,177	225	2,411	314	8,294	5,464	118,698
Wilayah Persekutuan	80,606	191,012	756	2,363	4,214	11,419	3,252	293,622
Negeri Sembilan	18,869	10,127	51	11	3	1,988	211	31,260
Melaka	16,791	12,169	28	6	3	760	510	30,267
Johor	76,003	58,136	286	562	14	5,723	2,305	143,029
Pahang	23,344	12,309	23	6	1	1,215	513	37,411
Terengganu	16,833	7,951	15	5	1	417	50	25,272
Kelantan	27,311	12,402	39	5	1	583	95	40,436
Sabah	32,718	35,169	277	118	177	3,021	1,875	73,355
Sarawak	43,727	40,457	81	47	140	3,696	2,880	91,028
Total	541,387	664,335	2,260	5,768	4,991	43,705	19,490	1,281,936

NEW REGISTRATION OF MOTOR VEHICLES BY STATE

MALAYSIA

YEAR 2005 - 2014

Total New Registration Of Motor Vehicles In Malaysia By State For The Year 2005 - 2014

STATE	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Perlis	3,811	4,109	4,205	5,602	4,566	5,434	4,202	5,475	3,627	6,266
Kedah	45,479	45,312	45,265	53,638	48,211	55,835	62,929	66,138	60,915	55,969
Pulau Pinang	100,824	101,515	101,949	109,033	92,320	111,882	106,514	113,340	92,863	91,505
Perak	75,923	74,959	80,369	88,783	78,040	84,199	87,577	94,952	82,438	71,812
Selangor	103,718	96,165	101,439	109,890	87,465	105,787	101,439	103,681	101,757	118,698
W.P. Kuala Lumpur	268,398	248,158	258,205	293,064	272,373	306,513	328,578	359,239	356,897	293,622
Negeri Sembilan	35,728	35,046	34,309	36,384	30,931	34,168	33,736	35,446	30,384	31,260
Melaka	34,108	31,434	33,591	36,609	30,919	33,692	33,530	36,354	29,761	30,267
Johor	139,529	132,133	141,679	156,013	130,485	145,040	155,611	172,608	161,963	143,029
Pahang	39,805	37,766	41,869	52,410	41,543	44,646	48,464	50,180	44,904	37,411
Terengganu	21,644	23,527	26,354	32,797	30,170	33,086	32,165	35,663	30,252	25,272
Kelantan	29,248	33,374	38,414	45,840	40,732	45,686	44,591	51,189	41,951	40,436
Sabah	46,691	44,593	49,737	61,338	58,834	69,301	79,229	85,049	74,124	73,355
Sarawak	75,202	63,422	65,826	75,202	70,772	82,803	93,434	102,435	90,838	91,028
Portal Rakan Niaga	0	0	0	0	0	0	0	0	0	172,006

As shown in Figure 6-3, 22.9% of the new motor vehicles in 2014 were registered in Wilayah Persekutuan which is remain as the state with the highest new motor vehicles registration but decreased 17.7% compared to the previous year. Follows by JPJ's Business Partner Transaction Portal (Portal Rakan Niaga) (13.4%). Portal Rakan Niaga just started in 2014 which allows transactions for vehicle registration to be done online . This might be one of the reasons most of the states decreased of their motor vehicles new registration compared to the year 2014 except for Perlis, Negeri Sembilan, Melaka and Sarawak. With the latest technology developments, people prefer to switch to the online registration.

Perlis remain as the state that have the lowest new registration of motor vehicles in Malaysia throughout the years. However, Perlis has increased dramatically (72.8%) compared to the year 2013. Overall, the new registrations of motor vehicles for the year 2014 increased by 6.6% over the previous year. It is a positive improvement compared to the previous year because there's a decreased of the new registrations of motor vehicles for the year 2013 compared to the year 2012.

NEW REGISTRATION OF MOTOR VEHICLES BY STATE

MALAYSIA

YEAR **2005 - 2014**

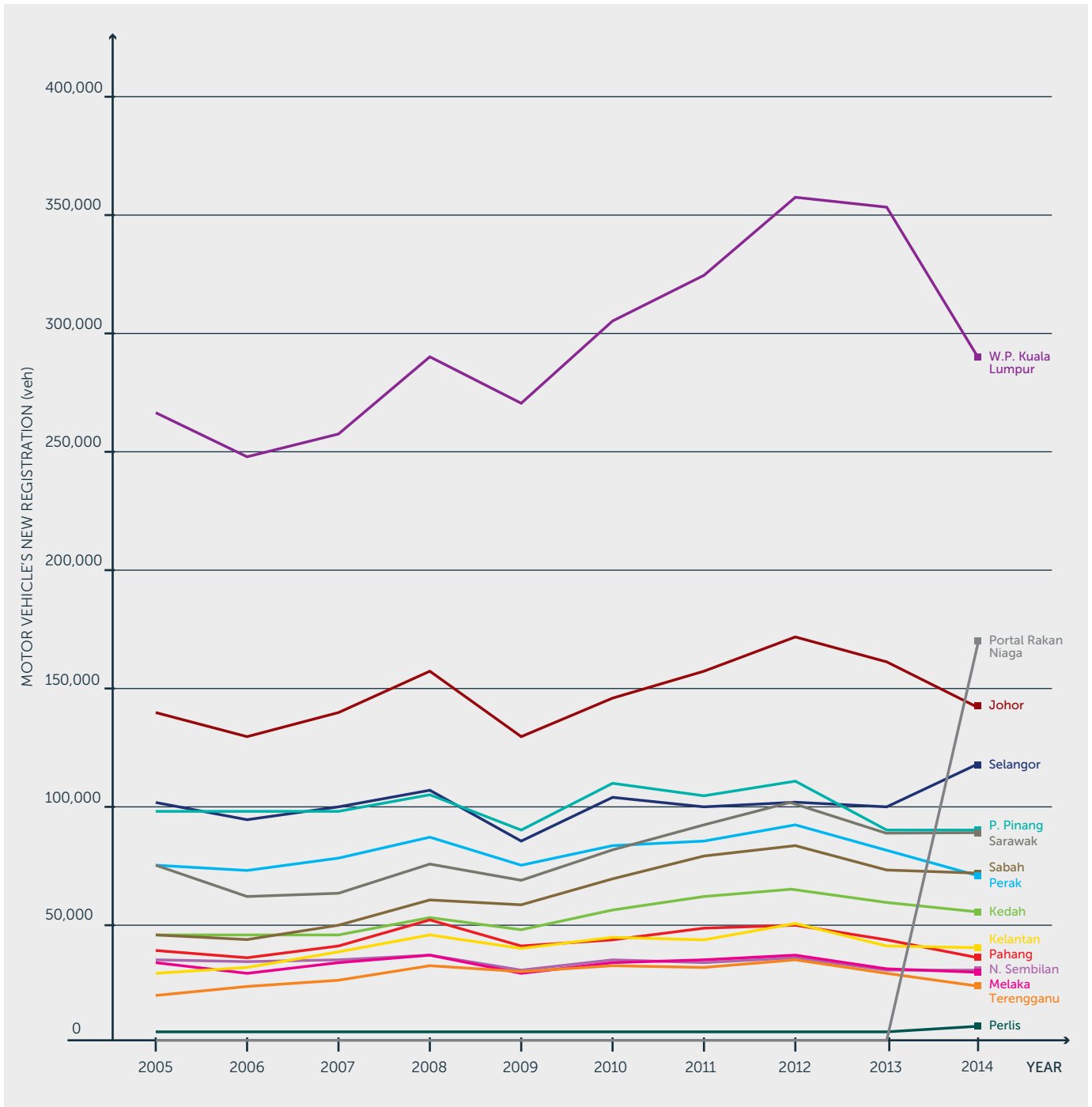
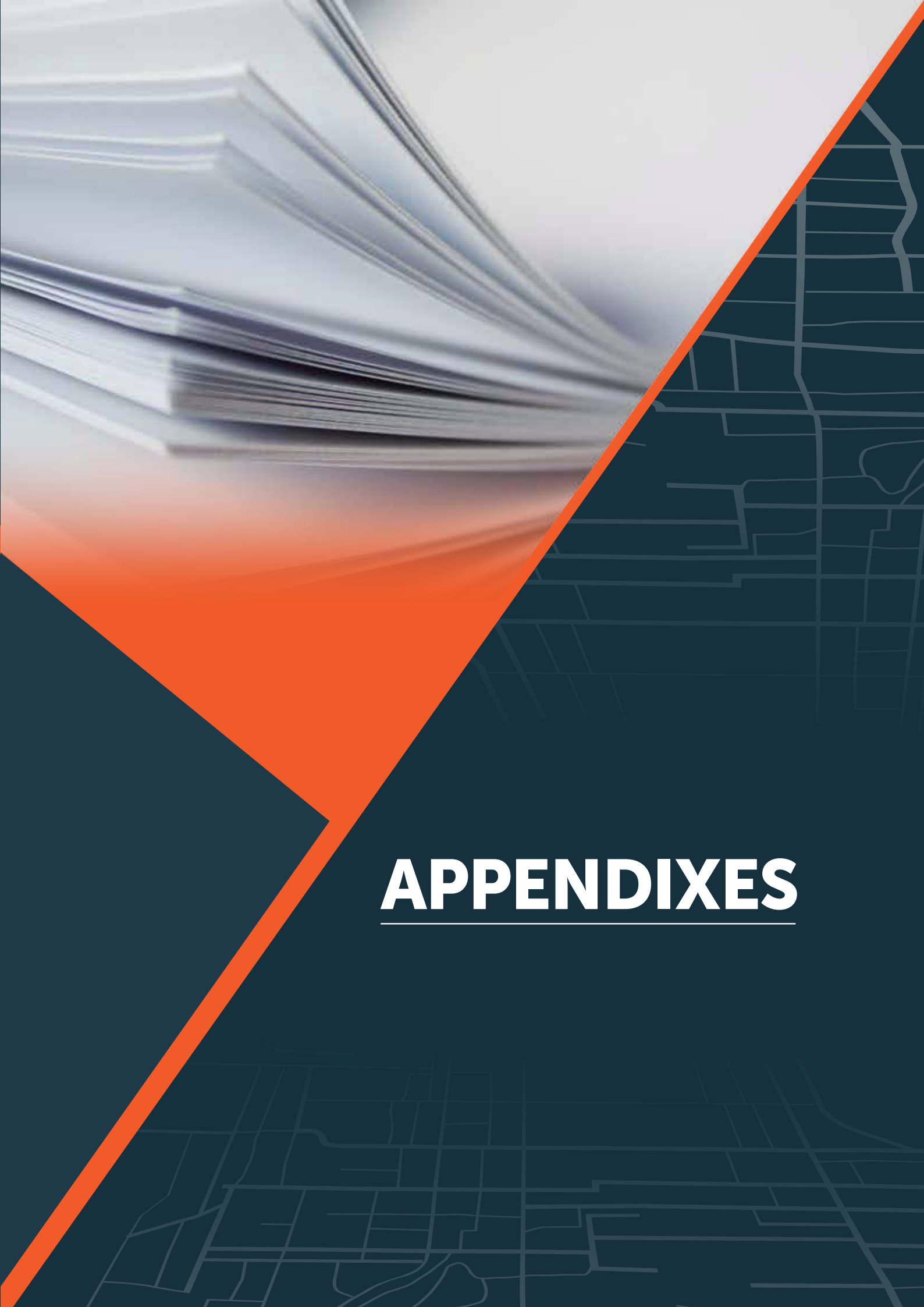


Figure 6-4 : New Registration Of Motor Vehicles In Malaysia By State For The Year 2005 - 2014





APPENDIXES

[Borang (BPJ) J.K.R.335 Pin.5/93]

Borang : KKR-B42
 No Keluaran : 3
 No Pindaan : 1
 Muka Surat : 1 / 1



**Bahagian Perancang Jalan
 KEMENTERIAN KERJA RAYA MALAYSIA**

**LAPORAN BANGCI LALULINTAS KEBANGSAAN
 Ringkasan Harian
 Rekod Kiraan Manual**

Negeri : Daerah :

No Stesen : Jenis Kajian :

Lokasi Stesen :

Lalulintas dari : Ke Arah

Bilangan Lorong :

Hari : Tarikh : Disediakan oleh :

Jam Permu- laan	Motokar dan Taksi	Van kecil dan Utiliti (Ringan - 2 gandar)	Lori dan Van Besar (Berat - 2 gandar)	Lori dengan 3 Gandar atau Treler (Berat dan melebihi 2 gandar)	Bas	Motosikal	Jumlah
0 6							
0 7							
0 8							
0 9							
1 0							
1 1							
1 2							
1 3							
1 4							
1 5							
1 6							
1 7							
1 8							
1 9							
2 0							
2 1							
2 2							
2 3							
0 0							
0 1							
0 2							
0 3							
0 4							
0 5							

Catatan :

VEHICLE CLASSIFICATION

CLASS	VEHICLE TYPE		
Motorcars , Taxis & Small MPV's <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">1</div>	 <p>Small MPV's :- Proton Ixora, Proton Alza, Honda Stream, Toyota Wish, Naza Ria, etc.</p>		
Small Vans, Big MPV's & Utilities (Light 2 axles) <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">2</div>	 <p>Big MPV's :- Toyota Alphard/Vellfire, etc.</p>		
Lorries & Large Vans (Heavy 2 axles) <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">3</div>	 <p>Large Vans :- 12 Seater and Above</p>		
Lorries with 3 axles (Heavy 3 axles and above) <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">4</div>			
Buses <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">5</div>			
Motorcycles & Scooters <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">6</div>	 <p>Including 3 Wheel Motorcycle</p>		

LEVEL OF SERVICE (LOS)**LOS - A**

No congestion.
Free flow with low traffic volumes
and high speeds.

**LOS - B**

No congestion.
Reasonably free flow, but speed
depends on traffic flow.

**LOS - C**

Minimum congestion.
Stable flow zone, but with drivers less
able to travel at their own chosen
speed.

**LOS - D**

Moderate congestion.
Unstable flow ;
Restricted drivers chosen speed.

**LOS - E**

Severe congestion.
Very unstable flow; possible short
stoppages.

**LOS - F**

Extreme congestion.
Unacceptable congestion;
stop-and-go traffic; forced flow.

Promoting Interrelation Of Roads And Improving Traffic Mobility Within Sabah And Sarawak Via Pan Borneo Expressway

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