

2016 ROAD TRAFFIC VOLUME MALAYSIA (RTVM)



MINISTRY OF WORKS MALAYSIA
HIGHWAY PLANNING DIVISION

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FOREWORD

Assalamu'alaikum Warahmatullahi Wabarakatuh,

Ministry Of Works Malaysia (MoW) has been collecting biennial vehicular traffic data travelling on Malaysia road network for a long time. These data are analysed and published annually in Road Traffic Volume Malaysia (RTVM) for the reference of government agencies and road transport industry players.

A lot of improvement has been done to the process of publishing the RTVM 2016. The existing 554 manual traffic survey stations are being upgraded to automatic stations using the latest available ITS technology in the market. The RTVM 2016 are now available in digital format that can be downloaded from the internet. This improvement helps a lot in ensuring the accuracy of the traffic data and the ease of access to the RTVM 2016.

I take note on the improvement incorporated in the publication of the RTVM 2016 and hope that more efforts are galvanized by Highway Planning Department, MoW to further improve the quality of the traffic data in future publication of RTVM.

**SECRETARY GENERAL
MINISTRY OF WORKS
MALAYSIA**



DATO' SRI ZOHARI BIN HAJI AKOB
Secretary General
Ministry of Work Malaysia

August 2017



PREFACE

Assalamu'alaikum Warahmatullahi Wabarakatuh,

The Road Traffic Volume Malaysia has been around for many years, all the way back from its debut in 1982 and will continue to flourish in the years to come as an essential means that will benefit many parties. As William Arthur Ward Said, "Feeling gratitude and not expressing it is like wrapping a present and not giving it". Therefore, please accept my utmost gratitude to everyone involved in realising RTVM 2016. We could not have done it without you.

Traffic data collection and update on the current status of federal and state traffic condition around Malaysia is the main objective of National Traffic Census, which is a programme conducted biennially. There are 554 station established nationwide. Currently, Highway Planning Division are in the process of migrating and progressing towards automation data collection. Through these census, the data are collected and published annually in Road Traffic Volume Malaysia (RTVM).

As Malaysians, it is important for all of us to strive towards growth and development. With these publication of RTVM, we strive to contribute on assistance that can benefit the needs of all parties involved in realising the vision of continuous improvement for development of road infrastructure.

It is our promise to continue our delivery of these annual reports, therefore we welcome your reviews, feedbacks and suggestion which will be taken into account to improve the quality of these publication. Our appreciation to Public Work Department Malaysia, Malaysian Highway Authority, Ministry Of Transport Malaysia along with the cooperation of other agencies who have meticulously embarked with us on the journey to publish RTVM 2016.

**Undersecretary
HIGHWAY PLANNING
DIVISION**



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

August 2017



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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".

October, conducted by the State Public Works Department (JKR Negeri) and coordinated by Highway Planning Division since 1967. The census data will be submitted to Highway Planning Division for further data analysing and processing.

The National Traffic Census is carried out twice a year during the month of March/ April and September/

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

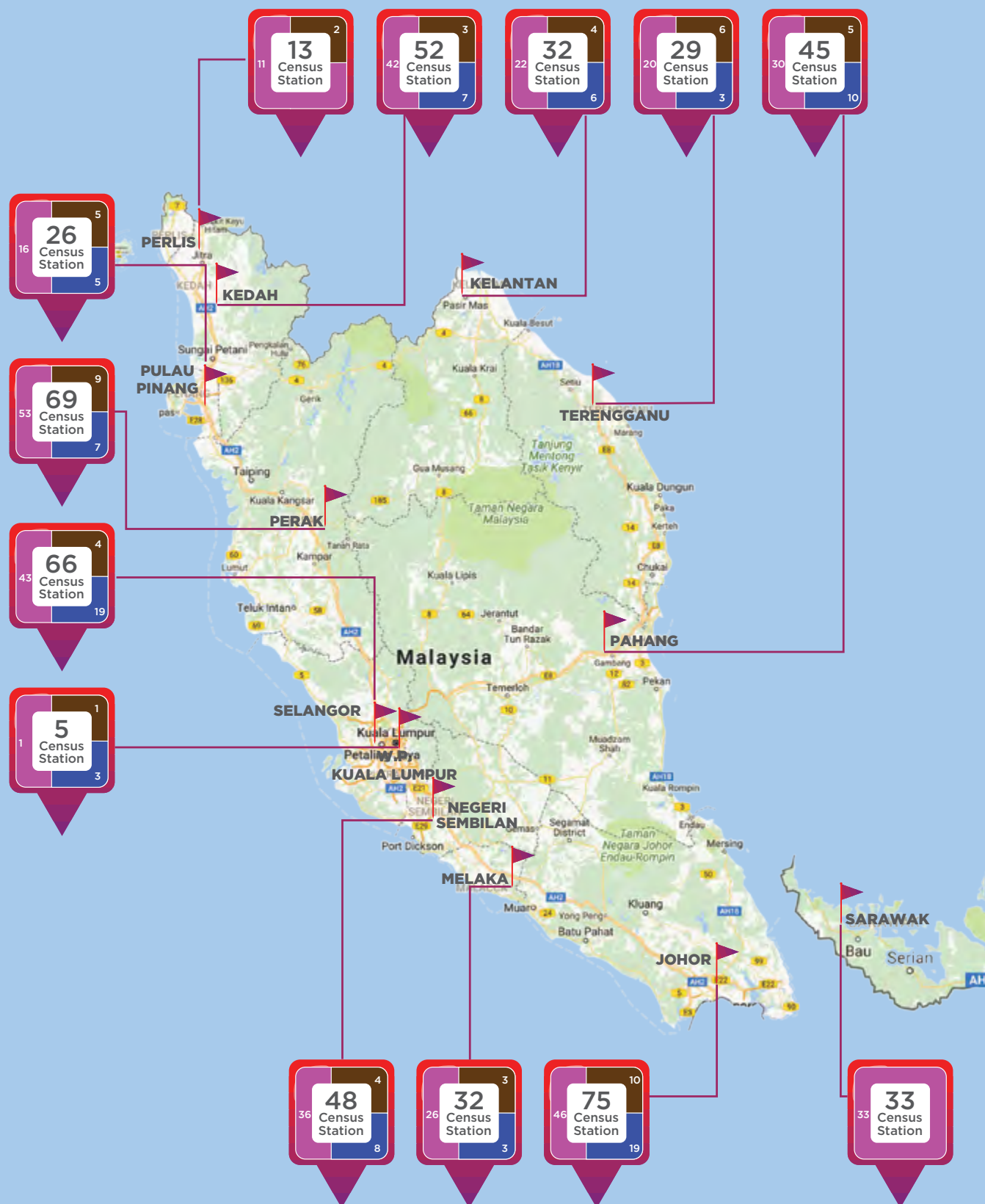
Figure 1-2 shows the overall composition according to the vehicle classification on Malaysian roads based on National Traffic Census at the 554 census stations for the year 2016.

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

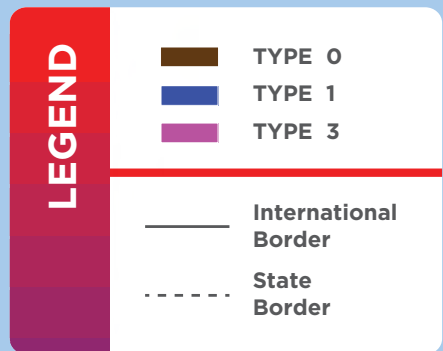
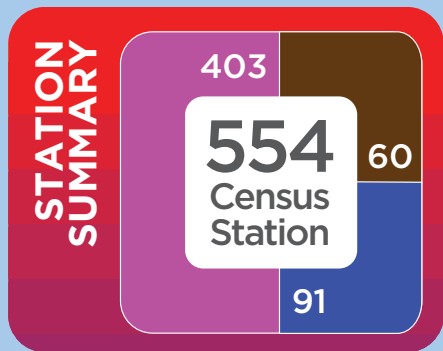
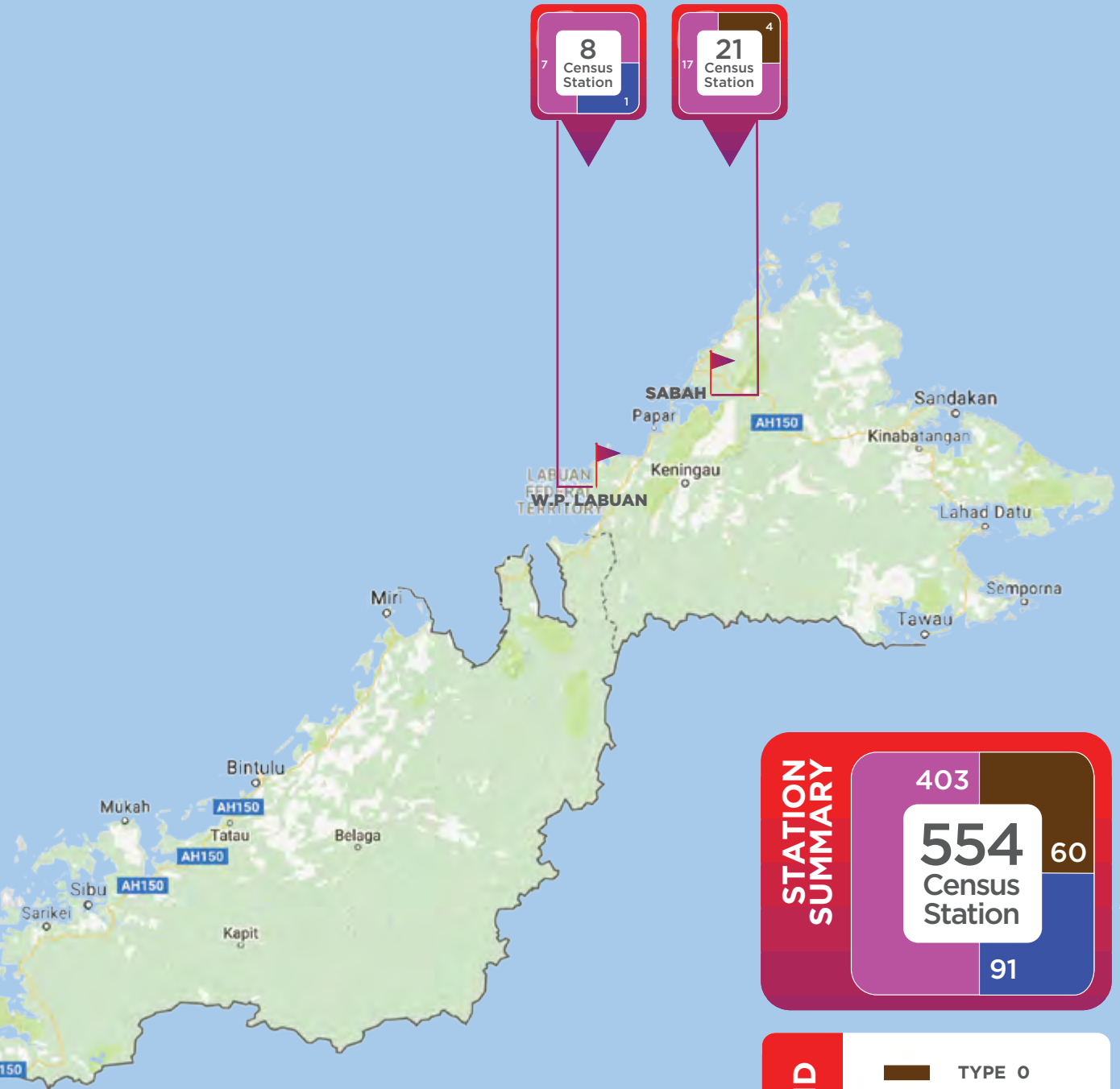
PENINSULAR MALAYSIA

492 TRAFFIC CENSUS STATIONS



SABAH, SARAWAK & W.P. LABUAN

62 TRAFFIC CENSUS STATIONS



NOTE TO USER

ROAD TRAFFIC VOLUME MALAYSIA (RTVM)

Road Traffic Volume Malaysia (RTVM) was first published in 1982 in the form of printed copy and in the form of digital copy (Compact Disc) from onwards (Compact Disc). Starting from 2014, RTVM became 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 for the current year will be published in the month of June the following year.

The content of RTVM consists of:

- Traffic Census Stations location description
- Road Traffic Volume information
- Level of Service
- Capacity Year
- Annual Traffic Growth Rates
- Toll Expressway
- Road Mileage
- Vehicle Registration

The benefits of RTVM are as follows:

- Provides proper road network planning and road side 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

ROAD TRAFFIC VOLUME MALAYSIA (RTVM)



RTVM is available to the public for online version at RM 100.00. 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>

NOTE TO USER

TYPE OF CARRIAGEWAY

There are two types of carriageway. Based on NTJ 27/2012 Terminologi Jalan shows that the type of the carriageway divides into two categories which is single carriageway and dual carriageway. The detail of the description as figure below:



Figure 1-3 : System Code For Single Carriageway

Figure 1-4 : System Code For Dual Carriageway

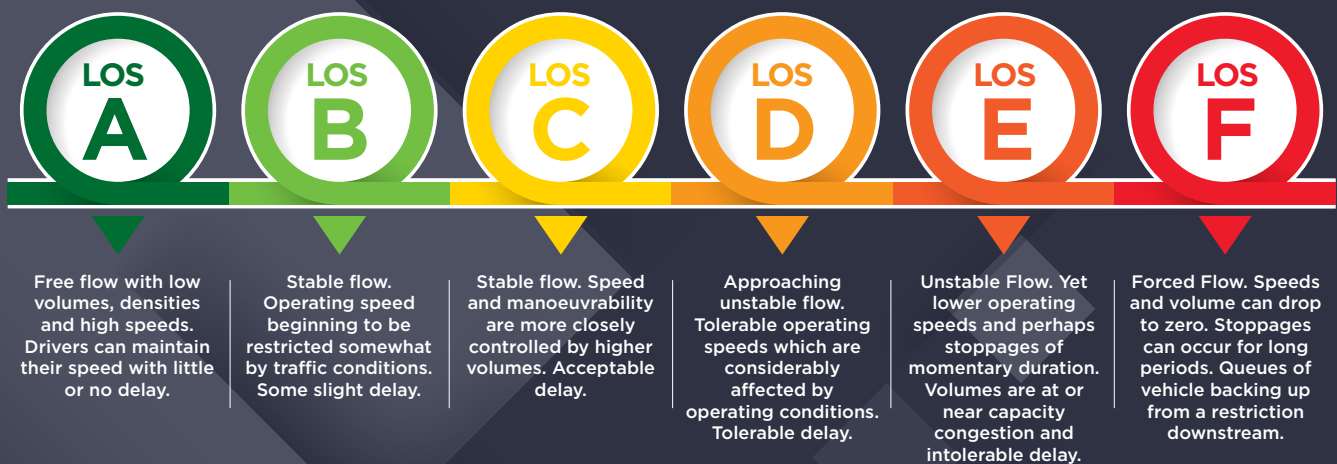
LEVEL OF SERVICE (LOS)

INTRODUCTION

Level of Service (LOS), in general, is a measure of effectiveness by which engineers determine the quality of services on elements of transportation infrastructure. It is a qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom of manoeuvre, safety, driving comfort and convenience and operating cost.

Service Volume

The service volume is the maximum volume of traffic that a designed road would be able to serve without the degree of congestion falling below a preselected level as defined by level of service (LOS), which is the operating conditions (freedom to manoeuvre) at the time the traffic is at the design hour volume. Table 2.1 gives an indication of the level of service (LOS) used.



Sources: *Arahan Teknik Jalan 8/86*

Table 2.1 : Level of Service (LOS)

BASIC CALCULATION TO DETERMINE THE LOS (MAINLINE)

Level of Service (LOS)

The Level of Service (LOS) is calculated into volume of capacity ratio (V/C) as per equation 1.0 below. Maximum hourly traffic volume in the formula must be converted to passenger car unit (pcu) by using the pcu equivalent factor in Table 3.1. Table 3.2 also gives the ranges of V/C ratio as an indicator for the level of service.

$$\text{LOS} = \frac{\text{Maximum Hourly Traffic Volume, V (pcu)}}{\text{Maximum Hourly Capacity, C (pcu)}} \quad (\text{equation 1.0})$$

VEHICLE CLASSES

Vehicle Class	PCU Equivalent Factor (Rural Standards)	PCU Equivalent Factor (Urban Standards)	PCU Equivalent Factor (Roundabout Design)	PCU Equivalent Factor (Traffic Signal Design)
Passenger Cars	1.00	1.00	1.00	1.00
Motorcycles	1.00	0.75	0.75	0.33
Lights Vans	2.00	2.00	2.00	2.00
Medium Lorries	2.50	2.50	2.80	1.75
Heavy Lorries	3.00	3.00	2.80	2.25
Buses	3.00	3.00	2.80	2.25

Source: A Guide on Geometric Design Of Roads, REAM-GL 2/2002

Table 3.1 : PCU Equivalent Factor

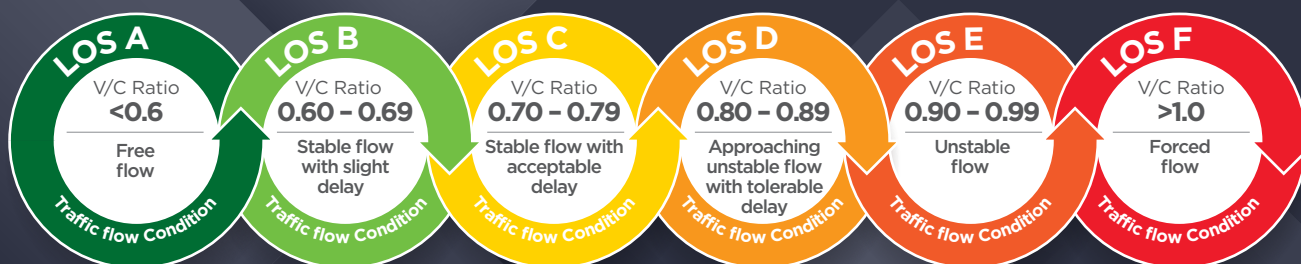


Table 3.2 : Level of Service Indicator

Capacity

The term highway capacity pertains to the ability of a roadway to accommodate traffic. It is defined as the maximum number of vehicles that can pass over a given section of a lane or a roadway during time period under prevailing roadway and traffic conditions. Capacity considered here is applicable only to uninterrupted flow or open roadways conditions. Capacity often stated in terms of passenger car unit (pcu).

3.2.1 Capacity Under Ideal Condition

Under the ideal condition, the possible capacity for uninterrupted flow are as follows :

- For 2-lane two way (total) = 2,800 pcu/hour
- For multi lane (per lane) = 2,000 pcu/hour

Ideal conditions consist of the following for two-lane roads :

- Design speed greater than or equal to 100 kph
- Lane width greater than or equal to 3.65m (12')
- Clear shoulders wider than or equal to 1.83m (6')
- No "No passing zone" on the highway
- All passenger cars in the traffic streams
- A 50/50 directional split
- No impediment to through traffic due to traffic control or turning vehicles
- Level terrain

Where one or more of these conditions are not met, the actual capacity can be calculated as per item 3.2 above.

Level of Services (LOS) are the 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 2016, Figure 3-3 shows that 21% of the roads in 2016 at the 554 census stations is already saturated (LOS F). There has been an improvement in traffic flowing at 6% and 2% at census station which had LOS F and LOS C respectively. There is also an increase of LOS A in road segments with uncongested traffic flow. However, LOS E shows a 7% increase of congested flow.

This shows that the Level of Service (LOS) of these roads has worsened due to the increase of traffic volume at the particular roads.

Capacity is the maximum rate at which vehicles can traverse a point or short segment during a specified time period. Projected capacity year is the year of traffic volume which is estimated to reach road capacity. In this report, the R value shows that the LOS has already reached F. However, some census stations show the reduction of percentage growth rate is represented the symbol (-).

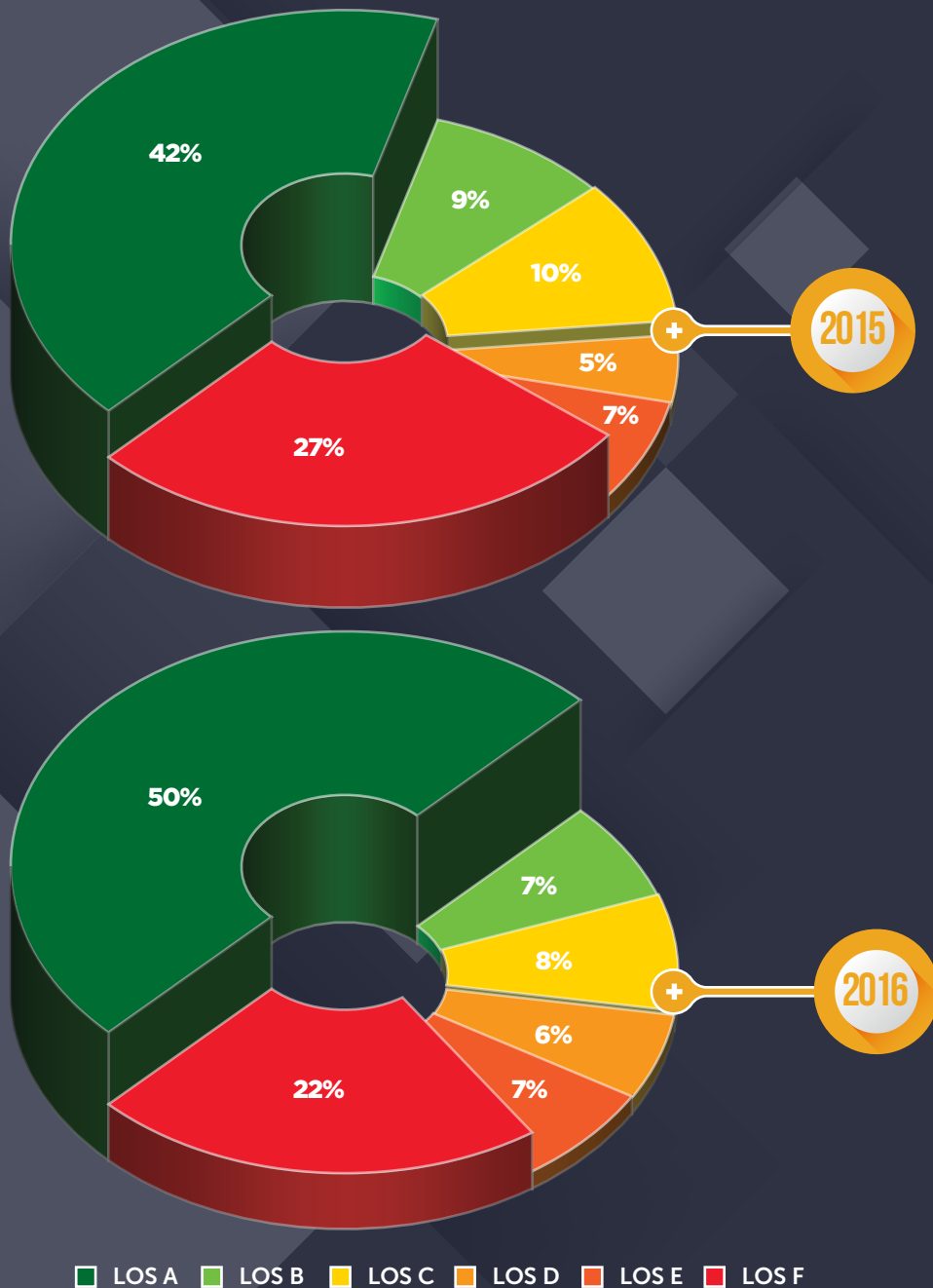


Figure 3-3 : The distribution of LEVEL OF SERVICE (LOS) of the roads at the 554 census stations in 2015 and 2016

Maximum Hourly Capacity, C

The maximum hourly traffic capacity

$$C = I \times R \times T \quad (\text{equation 2.0})$$

where

C = is the maximum one way hourly capacity

I = is the ideal hourly capacity as per Table 3.3 below

R = is the roadways Reduction Factor as in Table 3.4 below

T = is the traffic reduction factor as in Table 3.5 below

ROAD TYPE	PASSENGER VEHICLE UNITS (PCU) per hour
MULTILANE	2000 per lane
TWO LANES (BOTHWAYS)	2800 for the bothways

Table 3.4 : Maximum Hourly Capacity

CARRIAGEWAY WIDTH V/C Ratio	PAVED SHOULDER WIDTH			
	2.00m	1.50m	1.25m	1.00m
7.5m	1.00	0.97	0.94	0.90
7.0m	0.88	0.86	0.83	0.79
6.0m	0.81	0.78	0.76	0.73
5.0m	0.72	0.70	0.67	0.64

Source : Arahan Teknik Jalan 5/85

**Table 3.5 : Carriageways Roadway Reduction Factor



** Table 3.6 : Traffic Reduction Factor

Note :

- i. *Pc is the estimated percentage of commercial vehicles referred to medium and heavy goods vehicles with unladen weight exceeding 1.5 tonne.
- ii. **For the Mainline Highways R5/R6 and U5/U6 table 3.4 and 3.5 are considered not necessary.

TRAFFIC SCENARIO IN MALAYSIA

By using the Method of Least Squared Regression Analysis of traffic flow data for the years 2007 to 2016, RTVM gathered the traffic growth rates based on the calculation of compound “normal” traffic growth in terms of percentage growth of total traffic per year. Extrapolation based on this rate is used for the capacity year computation. Capacity year refers to the year when the projected traffic volume equals the computed road capacity.

Figure 4-1 shows The Malaysia Yearly 16-Hour Traffic Volume from the year 2007 to 2016 based on national Traffic Census Station. As highlighted, a decrease of 1.9% in 2016 can be seen for the 16-hour traffic volume compared to the year 2015. Based on this, a decrease in traffic volume can be seen for the first time in ten years.

The 2016 Normal Traffic Growth Rate (%) based on National traffic Census in Malaysia at the 554 census stations is 1.48% as can be seen in Figure 4-1. This value was obtained from the equation of the exponential trendline for the 10 years of 16-Hour traffic volume.

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

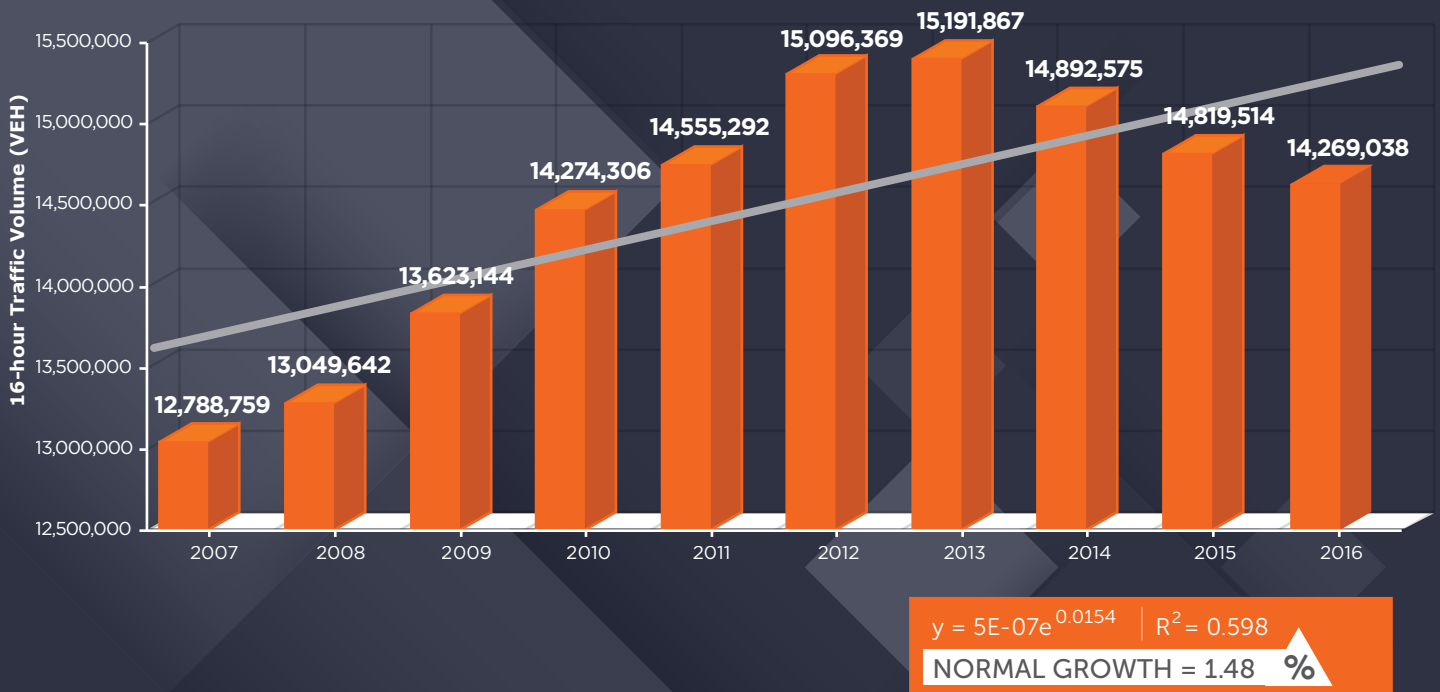


Figure 4-1 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic growth with Exponential Trendline for the year 2016 in Malaysia

By referring to the Figure 4-1, the 2016 Normal Traffic Growth Rate (%) based on National Traffic Census in Malaysia at the 554 census stations is 1.48%. This value was obtained from the equation of the exponential trendline for the 10 years 16-hour traffic volume.



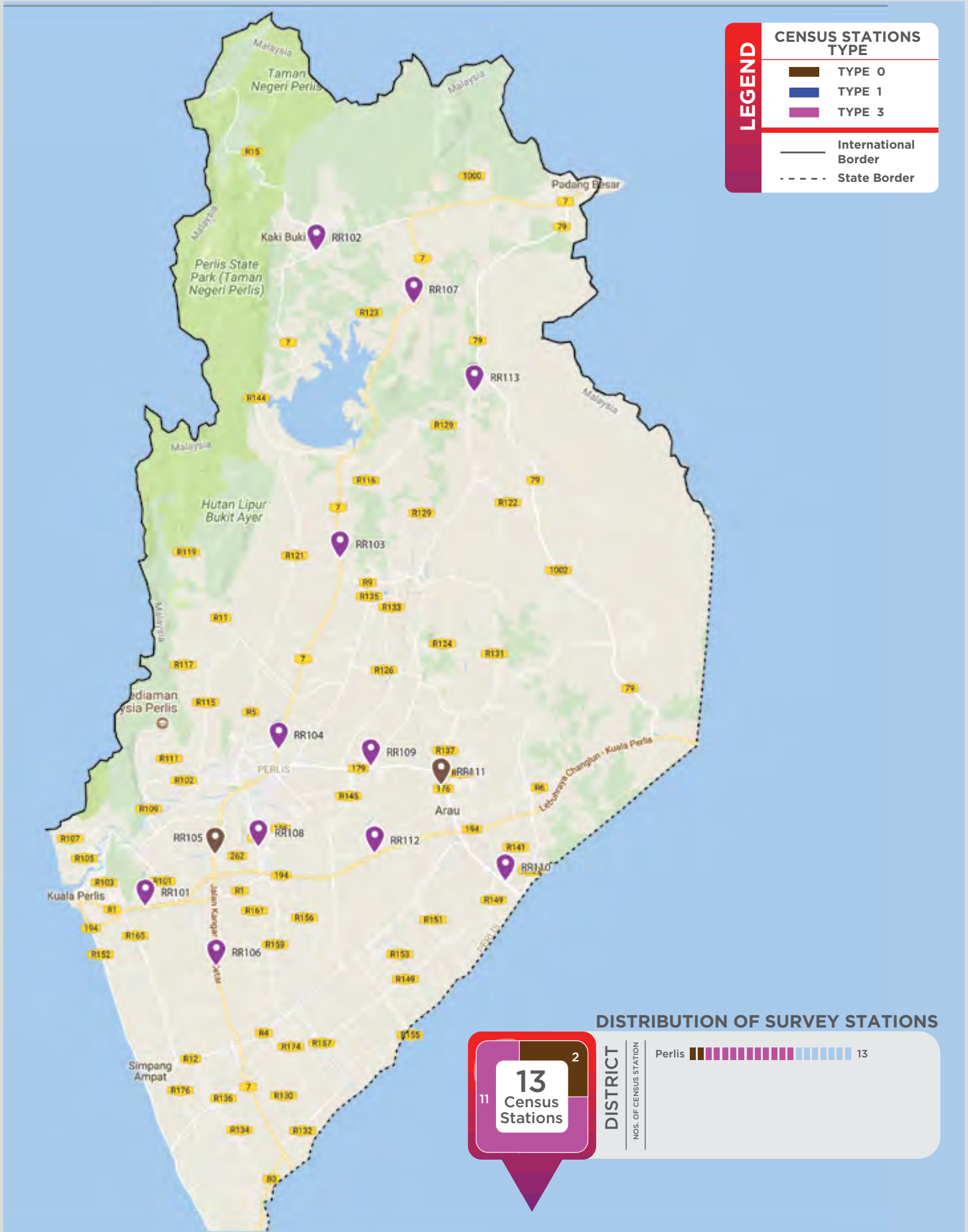
PERLIS

BUNGA EMAS

- FT179 Kangar - Arau Road
- 2660.22 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION & LOS MAP

State : Perlis



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Perlis

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
RR101	3	194	5.0	Kuala Perlis - Changlun (100m from Kg.Behor Lateh junction)	6.3936111	100.1567222	K 2-2
RR102	3	265	30.5	Titi Tinggi - Tasoh	6.6373056	100.2206111	T 1-1
RR103	3	7	10.6	Kangar - Padang Besar	6.5231944	100.2295833	T 1-1
RR104	3	7	2.0	Kangar - Padang Besar	6.4523056	100.2064444	K 2-2
RR105	0	7	3.5	Kangar - Alor Star (Seriab)	6.4130000	100.1826944	K 2-2
RR106	3	7	8.1	Kangar - Alor Star (Behor Mali)	6.3713333	100.1832222	T 1-1
RR107	3	7	22.6	Kangar - Padang Besar (Titi Tinggi)	6.6179722	100.2569167	T 1-1
RR108	3	R1	2.2	Jalan Raja Syed Alwi	6.4157778	100.1991944	K 2-2
RR109	3	R9	5.5	Mata Ayer - Beseri (Persimpangan Arau)	6.4457778	100.2411389	T 1-1
RR110	3	179	14.0	Kangar - Koding (Arau)	6.4030000	100.2915278	K 2-2
RR111	0	179	9.9	Kangar - Koding (Arau)	6.4386389	100.2673611	K 2-2
RR112	3	194	16.0	Kuala Perlis - Changlun (2km from Arau - Kuala Perlis bridge)	6.4131111	100.2425556	K 2-2
RR113	3	R16	22.2	Jalan Kubang Tiga - Padang Besar Ke Chuping	6.5852778	100.2798889	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perlis

APRIL 2016

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
RR101	-	17,763	1,642	0700-0800	59.9	6.3	4.2	0.4	1.5	27.7	100.0
RR102	-	6,060	747	1200-1300	40.5	7.5	5.8	0.5	0.8	45.0	100.0
RR103	-	16,883	1,619	1700-1800	57.7	6.9	3.1	0.4	0.9	31.1	100.0
RR104	-	31,426	3,624	1700-1800	63.9	5.7	1.8	0.2	0.3	28.1	100.0
RR105	31,384	27,401	2,532	1700-1800	70.7	4.1	3.1	0.3	1.5	20.3	100.0
RR106	-	15,739	1,609	1700-1800	60.4	5.8	5.0	1.3	1.5	26.0	100.0
RR107	-	6,517	736	1700-1800	59.8	8.7	4.6	1.2	1.2	24.6	100.0
RR108	-	26,834	2,713	1700-1800	64.3	5.6	2.0	0.1	0.6	27.4	100.0
RR109	-	11,281	1,041	0700-0800	54.3	6.1	3.9	0.9	0.4	34.4	100.0
RR110	-	11,088	1,212	1700-1800	68.5	6.5	5.5	0.4	0.4	18.8	100.0
RR111	34,042	30,002	3,012	1700-1800	71.1	2.2	1.9	0.5	0.6	23.7	100.0
RR112	-	17,396	1,972	1700-1800	73.4	6.1	2.4	0.3	1.7	16.1	100.0
RR113	-	2,868	274	1800-1900	64.8	10.0	3.5	0.8	0.0	20.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perlis

OCTOBER 2016

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
RR101	-	18,197	1,951	0700-0800	63.6	6.7	3.8	0.3	1.5	24.1	100.0
RR102	-	6,061	527	1200-1300	45.8	6.6	4.4	0.2	0.6	42.3	100.0
RR103	-	17,939	2,269	1700-1800	62.3	5.5	2.7	0.3	0.9	28.2	100.0
RR104	-	29,354	3,775	1700-1800	71.3	6.5	1.8	0.2	0.4	19.8	100.0
RR105	32,513	28,253	2,739	1800-1900	70.2	5.5	2.9	0.2	1.5	19.7	100.0
RR106	-	14,818	1,520	0700-0800	62.7	6.5	4.5	1.2	1.6	23.6	100.0
RR107	-	6,285	709	1700-1800	66.6	7.1	3.6	0.6	1.4	20.7	100.0
RR108	-	24,020	2,683	1700-1800	69.7	5.6	1.6	0.2	0.5	22.3	100.0
RR109	-	10,255	1,086	1700-1800	58.3	9.3	3.7	1.0	0.5	27.1	100.0
RR110	-	10,179	1,012	1700-1800	72.2	5.9	4.6	0.4	0.4	16.4	100.0
RR111	32,315	28,903	2,795	0700-0800	72.0	2.6	2.2	0.3	0.7	22.1	100.0
RR112	-	17,850	2,072	1700-1800	76.6	5.3	2.5	0.4	1.3	13.9	100.0
RR113	-	2,709	276	1700-1800	65.4	10.7	3.0	0.6	0.0	20.2	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Perlis

AVERAGE 2016

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
RR101	17,980	1,797	61.8	6.5	4.0	0.4	1.5	25.9	100%	A	2054
RR102	6,061	637	43.1	7.1	5.1	0.4	0.7	43.6	100%	A	2045
RR103	17,411	1,944	60.0	6.2	2.9	0.4	0.9	29.6	100%	E	2018
RR104	30,390	3,700	67.6	6.1	1.8	0.2	0.3	23.9	100%	A	-
RR105	27,827	2,636	70.5	4.8	3.0	0.2	1.5	20.0	100%	A	2039
RR106	15,279	1,565	61.5	6.1	4.7	1.2	1.6	24.8	100%	D	2028
RR107	6,401	723	63.2	7.9	4.1	0.9	1.3	22.6	100%	A	2039
RR108	25,427	2,698	67.0	5.6	1.8	0.2	0.6	24.9	100%	A	2101
RR109	10,768	1,064	56.3	7.7	3.8	1.0	0.5	30.8	100%	A	2022
RR110	10,634	1,112	70.4	6.2	5.1	0.4	0.4	17.6	100%	A	2103
RR111	29,453	2,904	71.6	2.4	2.0	0.4	0.7	22.9	100%	B	2050
RR112	17,623	2,022	75.0	5.7	2.4	0.3	1.5	15.0	100%	A	2027
RR113	2,789	275	65.1	10.4	3.2	0.7	0.0	20.6	100%	A	-

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Perlis

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
RR101	13,637	14,558	14,573	15,198	15,422	16,728	17,063	15,925	17,186	17,980	2.7	0.89
RR102	4,121	4,450	3,782	4,418	8,309	8,967	5,430	4,381	6,148	6,061	4.3	0.20
RR103	13,159	14,689	14,181	14,855	19,892	14,730	13,216	15,889	17,202	17,411	2.2	0.25
RR104	25,612	29,308	27,854	30,944	19,528	25,887	25,886	23,572	27,287	30,390	0.0	0.00
RR105	21,018	20,769	21,321	21,758	23,234	25,577	26,155	25,092	27,257	27,827	3.6	0.92
RR106	12,686	13,281	13,422	13,316	14,296	14,625	13,042	14,367	14,707	15,279	1.6	0.64
RR107	4,597	4,678	4,465	4,739	4,752	5,617	5,941	6,136	5,924	6,401	4.3	0.86
RR108	24,325	23,159	22,018	21,992	20,466	23,430	20,570	22,811	21,986	25,427	0.1	0.00
RR109	6,706	6,090	6,294	14,372	7,384	14,513	20,570	22,811	10,555	10,768	9.9	0.38
RR110	9,071	8,526	10,264	11,419	11,627	11,461	10,183	10,864	10,997	10,634	1.9	0.32
RR111	26,017	26,042	25,847	27,311	27,300	28,853	28,269	28,776	28,581	29,453	1.5	0.87
RR112	6,986	8,409	8,551	10,798	13,026	13,627	14,422	16,450	15,919	17,623	10.3	0.94
RR113	3,188	2,975	3,032	4,067	3,400	3,784	3,240	3,071	2,829	2,789	-1.3	0.10

STATISTIC FOR YEAR 2016

State : Perlis

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

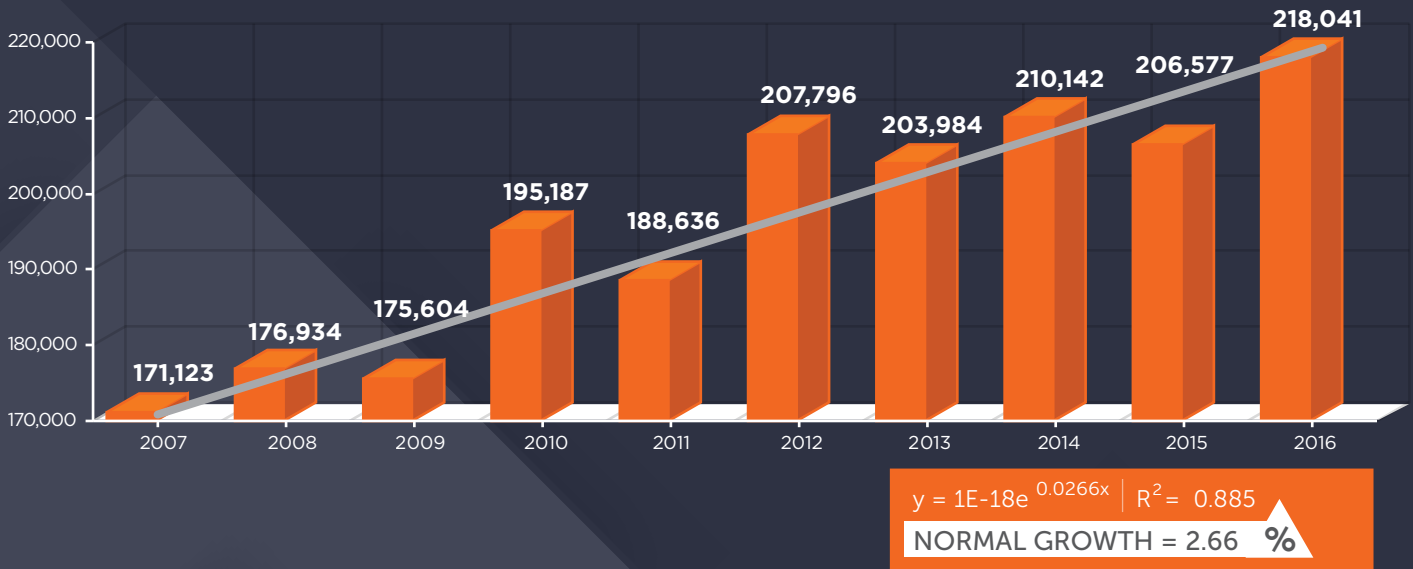




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Perlis



PERLIS

In Perlis, there are 13 census stations. The 16-hour traffic volume shows an increase of 46,916 vehicles from year 2007 to year 2016. It also shows a slight decrease in traffic volume for year 2009, 2011, 2013 and 2015. The figure shows an increase of 5.55% from 2015.



**5.55%
INCREASE**

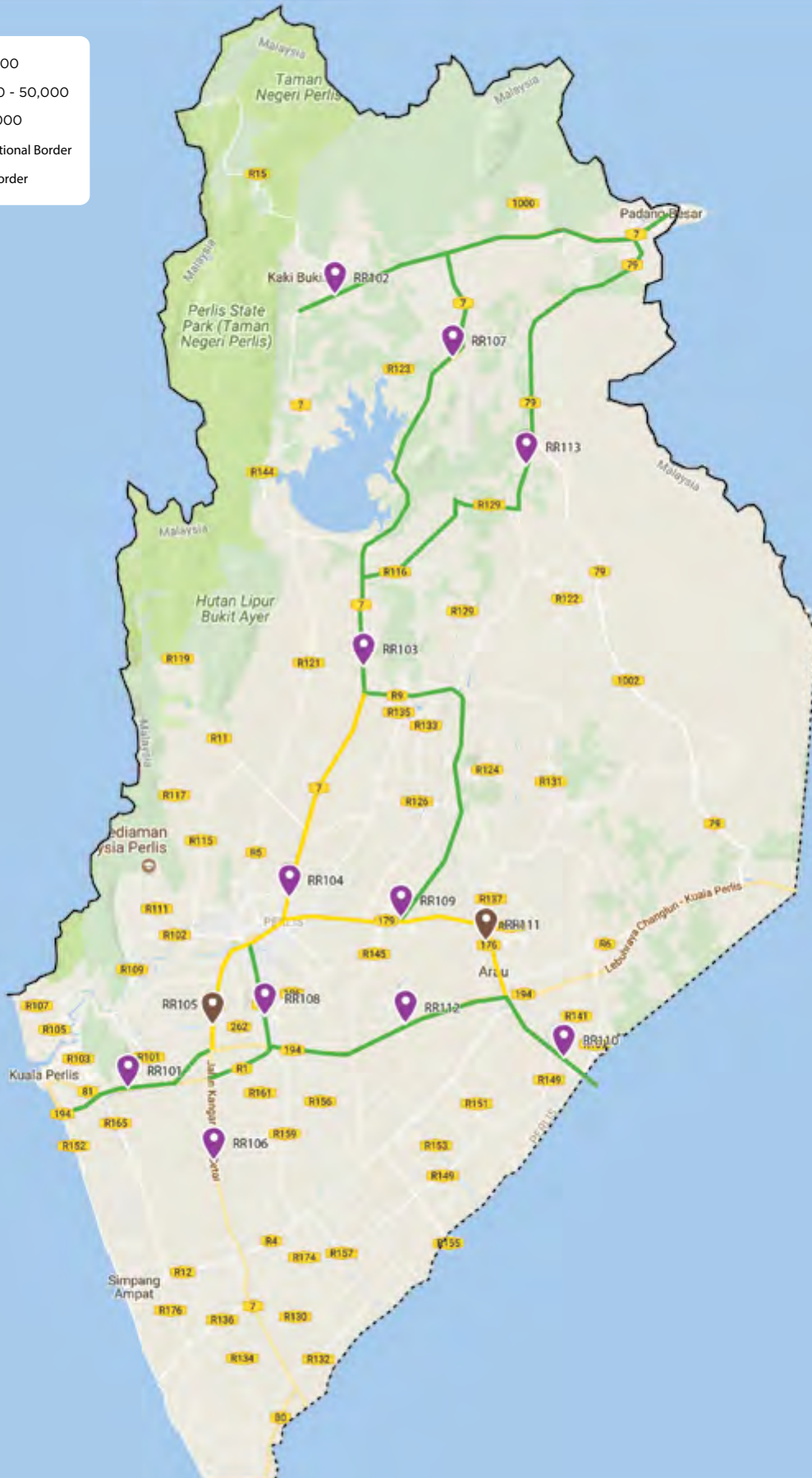
For the year 2016, the observed traffic growth rate for the state of Perlis is 2.66%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Perlis.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Perlis

Traffic Volume Scale

- < 25,000
- 25,000 - 50,000
- > 50,000
- International Border
- - - State Border







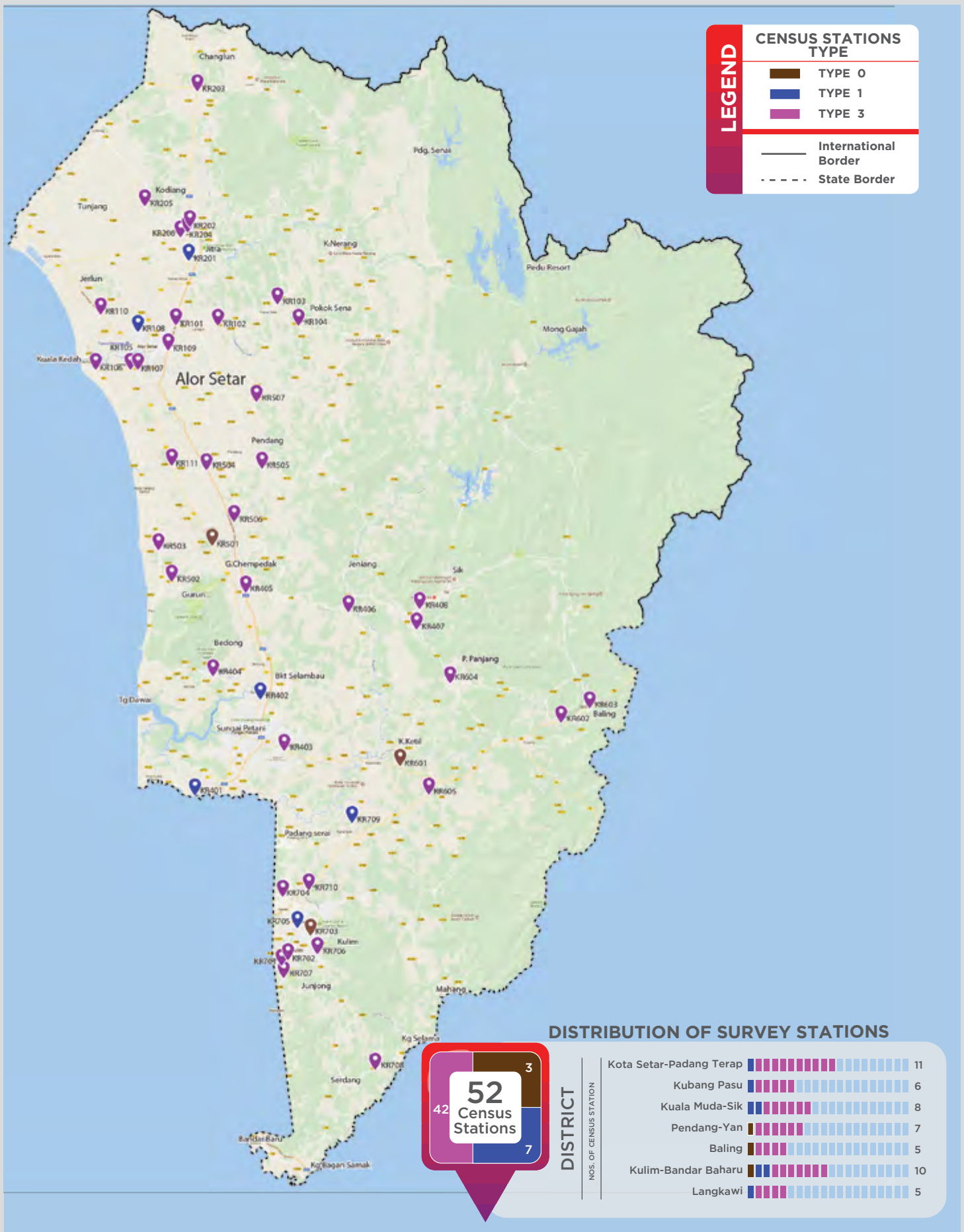
KEDAH

Suka Menanti Bridge, Alor Setar, Kedah.

- Kota Setar District, Kedah
 - 2017
 - 14517.99 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION & LOS MAP

State : Kedah



TRAFFIC CENSUS STATION & LOS MAP

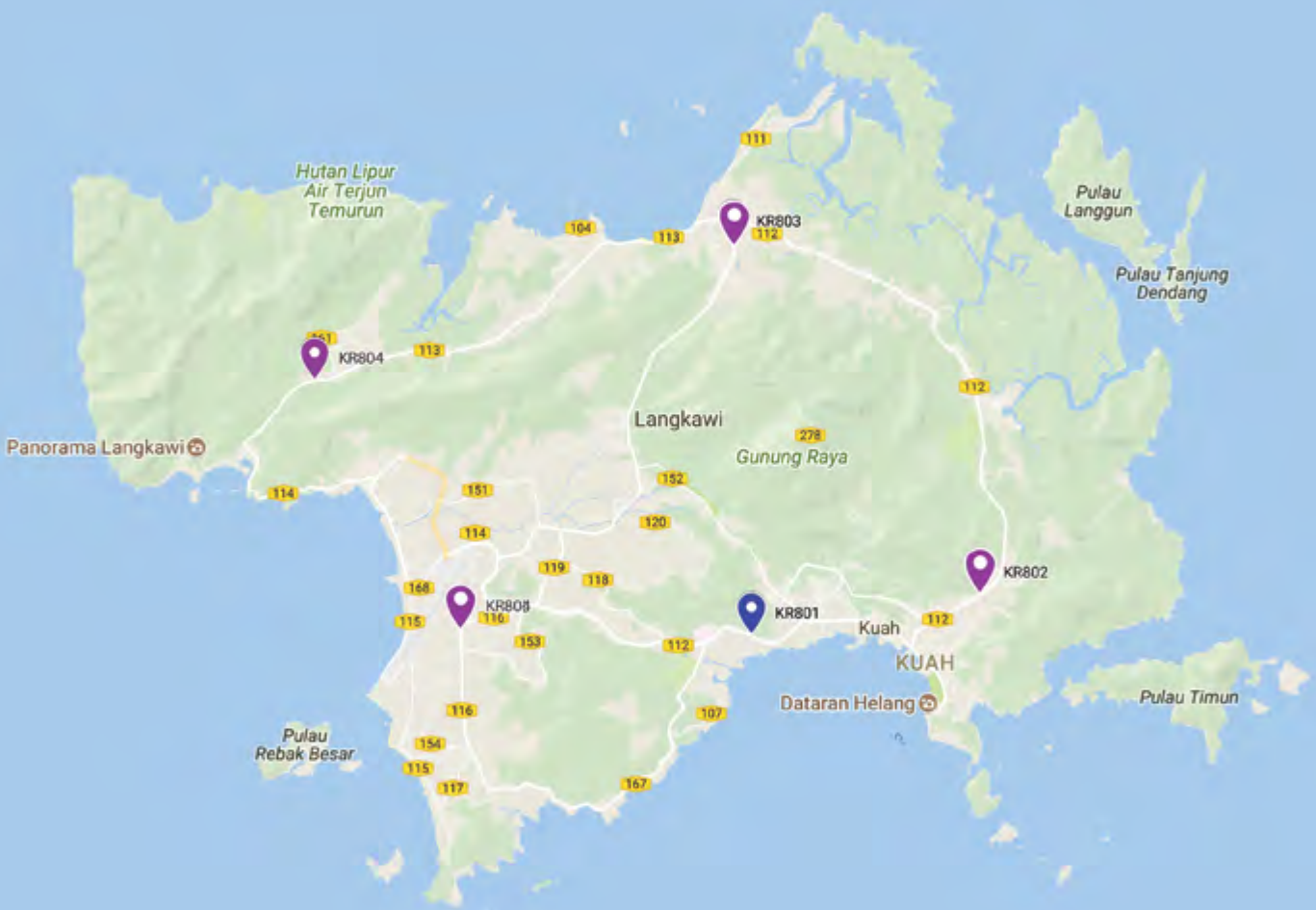
State : Langkawi

LEGEND

CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



DISTRIBUTION OF SURVEY STATIONS



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 (WGS84) (Latitude, Longitude)		Type of Carriageway
KR101	3	175	4.0	Langgar Road (Highway Bridge)	6.1506944	100.4030556	K 2-2
KR102	3	175	12.0	Alor Star - Langgar - Pokok Sena	6.1508333	100.4558333	K 2-2
KR103	3	K8	23.0	Alor Star - Pokok Sena - Kuala Nerang	6.1775000	100.5302778	T 1-1
KR104	3	175	27.0	Alor Star - Kg. Bukit Payong - Naka	6.1505556	100.5566667	T 1-1
KR105	3	78	4.0	Alor Star - Kuala Kedah	6.0961111	100.3472222	K 2-2
KR106	3	78	7.0	Alor Star - Kuala Kedah	6.0963889	100.3033333	K 2-2
KR107	3	255	5.0	West Alor Star Bypass	6.0938889	100.3552778	K 2-2
KR108	1	255	3.0	Package LLM Expressway	6.1425000	100.3561111	K 2-2
KR109	3	135	3.5	Alor Star - Pendang (Jalan Titi Hj. Idris)	6.1200000	100.3936111	T 1-1
KR110	3	7	8.0	Alor Star - Simpang Empat - Kangar	6.1641667	100.3097222	T 1-1
KR111	3	1	16.0	Alor Star - Guar Chempedak	5.9762500	100.3991667	T 1-1

District : KUBANG PASU

KR201	1	1	16.9	Alor Star - Jitra	6.2308056	100.4195000	K 2-2
KR202	3	1	20.6	Alor Star - Changlun	6.2713889	100.4198889	K 2-2
KR203	3	1	40.3	Jitra - Changlun	6.4433056	100.4295000	K 2-2
KR204	3	176	20.6	Alor Star - Jitra - Kodiang	6.2666111	100.4178889	K 2-2
KR205	3	176	27.4	Jitra - Kodiang	6.3005000	100.3646111	K 2-2
KR206	3	K4	1.6	Jitra - Ayer Hitam	6.2616111	100.4093056	T 1-1

District : KUALA MUDA - SIK

KR401	1	1	70.8	Alor Star - Sungai Petani - Butterworth (Bumbong Lima)	5.5674722	100.4281944	T 1-1
KR402	1	1	53.1	Alor Star - Sungai Petani (Sungai Lalang)	5.6847500	100.5096944	K 2-2
KR403	3	1	7.0	Alor Star - Sungai Petani - Kuala Ketil (Econsave)	5.6204440	100.5431110	K 2-2
KR404	3	253	1.0	Bedong - Tanjung Dawai (UiTM Merbok)	5.7150000	100.4497222	T 1-1
KR405	3	175	36.2	Alor Star - Gurun - Jeniang	5.8183889	100.4913889	K 2-2
KR406	3	K17	64.4	Jeniang - Bukit Selambau	5.7937220	100.6193890	T 1-1
KR407	3	K15	4.0	From Junction Batu Lima - Parit Panjang road	5.4618611	100.4218611	T 1-1
KR408	3	175	66.8	Alor Star - Jeniang - Sik	5.4755278	100.4231389	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Kedah

District : PENDANG - YAN

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
KR501	0	1	29.0	Alor Star - Sungai Petani (Bt. 18 Guar Chempedak)	5.8765833	100.4493056	T 1-1
KR502	3	K146	38.6	Alor Star - Guar Chempedak - Yan (in front of Sek. Men. Agama Yan)	5.8328056	100.3983611	T 1-1
KR503	3	K1	33.8	Alor Star - Kuala Kedah - Yan (Sedaka)	5.8703333	100.3816111	T 1-1
KR504	3	K133	5.0	Alor Star - Kota Sarang Semut - Pendang - Titi Hj. Idris	5.9727778	100.4435833	T 1-1
KR505	3	K151	4.0	Pendang - Sg. Tiang (Cegar)	5.9726111	100.5107778	T 1-1
KR506	3	K147	10.0	Pendang - Jenun - Pdg. Lembu (Sek. Keb. Jenun)	5.9064722	100.4768056	T 1-1
KR507	3	K128	9.0	Pendang - Tobiar - Kubur Panjang (in front of Maktab Mahmud)	6.0565278	100.5035000	T 1-1

District : BALING

KR601	0	67	23.9	S. Petani - Baling (Before K722 Junction)	5.6014167	100.6843611	T 1-1
KR602	3	67	51.5	S. Petani - Baling (in front of Sek. Keb. Pulau)	5.6569167	100.8859722	T 1-1
KR603	3	76	1.0	Gerik Road - Pkln. Hulu - Baling (0.3km from Baling Roundabout)	5.6744722	100.9220278	T 1-1
KR604	3	K15	1.3	Bt. 5 - Parit Panjang - Bt. 42 (0.3km from Parit Panjang Roundabout)	5.7047222	100.7474722	T 1-1
KR605	3	4	46.0	Kulim - Baling - Gerik	5.5657500	100.7207778	T 1-1

District : KULIM - BANDAR BAHARU

KR701	3	254	5.5	Kulim - Bukit Mertajam	5.3540833	100.5355833	K 2-2
KR702	3	254	4.7	Kulim - Bukit Mertajam	5.3584444	100.5433333	K 2-2
KR703	0	169	30.5	Kulim - Junjong (Petronas)	5.3916111	100.5719444	K 2-2
KR704	3	136	56.0	Kulim - Mahang (Hospital)	5.4391944	100.5371944	T 1-1
KR705	1	136	49.0	Kulim - Lunas - Pdg. Serai - Merbau Pulas	5.4010278	100.5557778	K 2-2
KR706	3	136	45.5	Kulim - Lunas - Pdg. Serai - Merbau Pulas	5.3683056	100.5809167	K 2-2
KR707	3	K145	5.0	Kulim - Junjong	5.3377778	100.5376111	T 1-1
KR708	3	171	5.0	Serdang - Selama	5.2244722	100.6235833	T 1-1
KR709	1	136	74.6	Kulim - Lunas - Pdg. Serai - Merbau Pulas	5.5310000	100.6235833	T 1-1
KR710	3	4	24.2	Jalan Kulim - Lunas - Sg. Karangan - Baling	5.4461111	100.5692778	T 1-1

District : LANGKAWI

KR801	1	112	4.5	Pekan Kuah - Padang Matsirat	6.3252500	99.8080833	K 2-2
KR802	3	112	1.5	Pekan Kuah - Tanjung Rhu	6.3352500	99.8641944	T 1-1
KR803	3	112	1.0	Padang Lalang - Ulu Melaka	6.4210556	99.8034167	T 1-1
KR804	3	113	1.0	Kampung Kok - Kampung Ewa	6.3875556	99.7117222	T 1-1
KR805	3	116	1.0	Simpang Kedawang - Lapangan Terbang	6.3269167	99.7366944	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kedah

APRIL 2016

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	Busses	Motor-cycles	Total
KR101	-	51,848	4,607	0700-0800	63.1	11.3	1.9	1.1	0.2	22.5	100.0
KR102	-	30,003	3,659	0800-0900	54.6	6.8	3.8	0.9	0.6	33.3	100.0
KR103	-	20,126	2,006	0700-0800	53.8	3.9	5.0	0.9	0.7	35.6	100.0
KR104	-	7,645	846	0700-0800	47.4	6.0	5.7	1.3	0.3	39.4	100.0
KR105	-	38,195	3,263	0700-0800	65.8	9.0	2.2	0.8	0.2	22.0	100.0
KR106	-	29,901	2,301	1400-1500	57.8	10.3	1.4	1.3	0.1	29.1	100.0
KR107	-	45,382	4,213	1700-1800	64.5	11.4	4.1	3.0	0.2	16.9	100.0
KR108	-	41,561	3,522	1700-1800	65.0	3.7	2.1	0.3	1.5	27.4	100.0
KR109	-	30,478	2,715	1700-1800	51.3	8.4	1.0	0.6	0.2	38.6	100.0
KR110	-	21,455	2,030	1700-1800	55.8	9.2	5.5	3.4	0.6	25.5	100.0
KR111	-	18,449	1,625	1700-1800	52.6	10.3	4.8	6.1	0.6	25.6	100.0

District : KUBANG PASU

KR201	-	29,421	2,927	1700-1800	63.1	6.1	2.5	0.4	0.4	27.4	100.0
KR202	-	36,626	3,360	1700-1800	58.2	4.7	2.2	0.4	0.2	34.3	100.0
KR203	-	20,941	2,166	0700-0800	62.9	5.7	2.5	5.9	1.1	21.8	100.0
KR204	-	14,892	1,955	0700-0800	61.3	6.2	2.8	0.8	0.1	28.7	100.0
KR205	-	17,355	1,692	1800-1900	61.0	6.2	2.0	0.3	0.1	30.3	100.0
KR206	-	7,979	860	0700-0800	54.5	4.4	4.3	1.0	0.1	35.8	100.0

District : KUALA MUDA - SIK

KR401	-	21,184	1,942	1800-1900	60.0	4.9	5.5	1.0	0.3	28.3	100.0
KR402	-	49,677	4,282	1800-1900	59.5	5.2	5.2	1.7	0.4	28.0	100.0
KR403	-	28,749	2,377	1800-1900	62.4	7.7	3.9	2.9	0.6	22.4	100.0
KR404	-	15,090	1,477	0700-0800	43.7	7.3	5.4	3.8	0.4	39.5	100.0
KR405	-	20,739	2,139	0700-0800	55.6	11.3	5.2	2.8	0.3	24.9	100.0
KR406	-	4,544	402	0700-0800	45.4	7.7	4.0	13.5	0.6	28.9	100.0
KR407	-	7,837	835	0700-0800	46.5	6.8	5.1	2.6	1.1	37.9	100.0
KR408	-	10,016	832	1500-1600	53.5	8.2	3.5	1.2	0.6	33.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kedah

APRIL 2016

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	Busses	Motor-cycles	Total
KR501	21,068	18,730	1,706	1700-1800	58.5	6.2	5.6	4.7	0.6	24.5	100.0
KR502	-	7,355	728	0700-0800	66.3	6.1	4.6	1.2	0.1	21.8	100.0
KR503	-	7,780	658	1700-1800	46.8	9.0	6.4	5.7	0.3	31.8	100.0
KR504	-	10,739	969	1800-1900	55.2	3.6	6.3	4.6	0.3	30.0	100.0
KR505	21,068	12,369	1,090	1800-1900	53.9	3.5	4.5	0.7	0.1	37.3	100.0
KR506	-	5,846	724	0700-0800	41.0	4.1	3.8	0.7	0.0	50.3	100.0
KR507	-	7,516	657	0700-0800	45.1	8.9	5.5	5.7	0.1	34.7	100.0

District : BALING

KR601	14,236	12,733	1,164	1800-1900	54.2	8.1	4.2	1.6	1.1	30.9	100.0
KR602	-	23,021	1,983	1700-1800	73.4	5.3	3.0	0.2	0.6	17.4	100.0
KR603	-	10,293	904	1600-1700	53.8	6.0	4.1	0.7	0.8	34.4	100.0
KR604	-	9,712	1,154	1100-1200	38.7	5.6	4.2	0.5	0.2	50.8	100.0
KR605	-	6,929	755	0700-0800	50.4	10.3	11.3	5.1	0.9	22.1	100.0

District : KULIM - BANDAR BAHARU

KR701	-	34,530	3,529	1800-1900	62.6	5.5	3.0	1.1	0.3	27.4	100.0
KR702	-	45,113	4,836	0700-0800	63.3	4.3	2.6	0.4	0.3	29.0	100.0
KR703	31,754	29,307	3,110	1800-1900	70.7	3.3	1.7	0.4	0.3	23.6	100.0
KR704	-	15,149	1,650	0700-0800	51.9	6.4	3.9	1.0	0.7	36.0	100.0
KR705	-	30,096	2,641	1400-1500	66.2	2.6	2.3	0.7	0.6	27.5	100.0
KR706	-	19,532	2,100	1700-1800	52.9	7.0	4.4	1.2	0.3	34.2	100.0
KR707	-	17,500	1,966	0700-0800	55.4	6.4	4.3	2.6	0.5	30.9	100.0
KR708	-	4,600	399	1800-1900	43.3	12.1	9.3	3.3	1.3	30.6	100.0
KR709	-	10,841	1,062	0700-0800	51.5	7.0	8.8	3.7	1.9	27.2	100.0
KR710	-	29,362	4,881	0700-0800	63.9	3.5	8.0	3.5	0.7	20.4	100.0

District : LANGKAWI

KR801	-	32,950	2,869	1700-1800	57.9	10.1	3.7	1.0	0.4	27.0	100.0
KR802	-	17,153	1,411	0800-0900	54.4	7.5	4.8	1.5	0.9	31.0	100.0
KR803	-	12,686	1,100	0700-0800	42.2	7.3	4.4	2.5	0.8	42.7	100.0
KR804	-	4,372	428	1800-1900	48.3	9.7	4.8	2.8	1.2	33.1	100.0
KR805	-	20,893	1,843	1400-1500	46.7	7.2	3.5	1.4	0.9	40.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kedah

OCTOBER 2016

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	Busses	Motor-cycles	Total
KR101	-	56,774	4,813	1800-1900	68.3	7.4	1.5	1.4	0.2	21.2	100.0
KR102	-	23,506	2,245	0700-0800	65.4	5.3	4.7	1.6	0.3	22.7	100.0
KR103	-	15,619	1,386	0700-0800	58.0	4.6	4.5	1.2	0.5	31.2	100.0
KR104	-	6,773	589	0700-0800	52.6	5.6	5.0	1.1	0.3	35.3	100.0
KR105	-	31,539	2,878	1300-1400	81.7	3.7	2.6	0.6	0.2	11.1	100.0
KR106	-	24,725	2,339	0700-0800	66.7	8.2	2.9	1.2	0.2	20.7	100.0
KR107	-	32,890	4,813	1800-1900	70.7	4.5	5.2	2.4	0.3	16.9	100.0
KR108	-	37,043	3,130	1700-1800	63.5	7.4	2.1	0.5	1.6	25.0	100.0
KR109	-	32,523	3,759	0700-0800	53.6	6.2	1.1	0.5	0.2	38.3	100.0
KR110	-	21,094	2,298	1800-1900	64.8	4.7	4.5	2.2	0.6	23.2	100.0
KR111	-	17,839	1,731	1600-1700	58.8	6.2	5.4	4.2	0.7	24.7	100.0

District : KUBANG PASU

KR201	-	34,375	3,284	1300-1400	64.0	6.2	2.2	0.5	0.4	26.7	100.0
KR202	-	39,445	4,226	0700-0800	66.5	5.9	2.2	0.3	0.1	25.0	100.0
KR203	-	19,288	2,404	0700-0800	67.9	6.7	2.6	6.5	1.3	15.0	100.0
KR204	-	15,457	1,544	0700-0800	64.2	6.7	3.0	0.4	0.1	25.7	100.0
KR205	-	19,233	3,124	2000-2100	58.4	5.0	1.8	0.2	0.3	34.3	100.0
KR206	-	8,590	782	0700-0800	58.0	5.5	4.3	0.6	0.1	31.5	100.0

District : KUALA MUDA - SIK

KR401	-	22,128	1,963	0700-0800	64.5	5.1	4.3	1.0	0.3	24.9	100.0
KR402	-	41,182	3,281	1700-1800	57.8	9.9	4.2	3.2	0.4	24.5	100.0
KR403	-	25,550	2,566	1700-1800	67.5	10.1	3.8	1.7	0.5	16.3	100.0
KR404	-	13,719	1,323	0700-0800	49.2	8.7	4.6	2.5	0.3	34.7	100.0
KR405	-	20,165	2,096	1700-1800	59.4	10.3	4.7	3.3	0.3	22.1	100.0
KR406	-	3,906	383	0700-0800	44.8	12.2	11.4	6.3	0.5	24.9	100.0
KR407	-	8,895	762	1700-1800	47.7	7.8	3.4	2.0	1.0	38.1	100.0
KR408	-	15,101	1,470	1700-1800	51.5	6.4	2.8	1.0	0.7	37.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kedah

OCTOBER 2016

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	Busses	Motor-cycles	Total
KR501	20,439	17,712	1,815	1800-1900	60.0	7.1	6.8	2.4	0.5	23.1	100.0
KR502	-	9,676	1,033	1300-1400	60.3	7.0	3.7	0.5	0.0	28.5	100.0
KR503	-	7,022	636	1700-1800	49.0	11.4	6.1	5.4	0.3	27.8	100.0
KR504	-	11,045	1,068	1700-1800	54.3	6.3	5.3	1.7	0.3	32.2	100.0
KR505	-	10,520	983	0700-0800	51.6	3.8	5.0	2.3	0.1	37.1	100.0
KR506	-	5,441	553	0700-0800	46.0	2.9	2.8	0.8	0.0	47.4	100.0
KR507	-	7,749	881	0700-0800	47.6	12.3	3.5	3.4	0.0	33.2	100.0

District : BALING

KR601	13,602	12,452	1,084	1700-1800	53.9	8.1	5.3	1.4	1.0	30.4	100.0
KR602	-	25,771	2,213	1700-1800	63.0	6.1	2.7	0.3	0.5	27.4	100.0
KR603	-	9,222	874	0700-0800	54.4	9.4	4.1	0.6	0.9	30.6	100.0
KR604	-	6,641	653	0700-0800	43.9	7.8	4.4	0.4	0.3	43.2	100.0
KR605	-	8,124	862	0700-0800	52.4	11.3	8.6	5.2	1.1	21.4	100.0

District : KULIM - BANDAR BAHARU

KR701	-	44,337	4,822	0700-0800	60.2	7.1	2.5	0.8	0.2	29.3	100.0
KR702	-	43,292	5,574	0700-0800	64.4	2.7	3.2	0.9	0.4	28.5	100.0
KR703	32,670	30,614	2,895	0700-0800	72.0	3.4	1.4	0.5	0.3	22.4	100.0
KR704	-	17,507	1,945	1800-1900	52.4	5.8	4.2	1.8	1.0	34.8	100.0
KR705	-	31,780	3,001	0700-0800	66.0	3.7	2.5	0.5	0.6	26.6	100.0
KR706	-	15,487	1,746	0700-0800	50.0	6.2	3.7	1.6	0.5	38.0	100.0
KR707	-	24,176	3,993	0700-0800	61.2	7.1	4.0	1.5	0.2	26.0	100.0
KR708	-	4,170	448	1700-1800	45.5	10.9	7.5	3.2	0.7	32.1	100.0
KR709	-	9,997	1,107	0700-0800	55.1	5.3	7.6	3.5	1.7	26.7	100.0
KR710	-	27,567	3,696	0700-0800	64.0	4.6	5.5	6.3	0.8	18.8	100.0

District : LANGKAWI

KR801	-	38,529	3,032	1700-1800	63.9	7.1	4.8	1.5	1.0	21.7	100.0
KR802	-	14,372	1,225	1800-1900	53.8	8.0	3.5	0.7	0.4	33.5	100.0
KR803	-	10,360	1,349	1700-1800	50.6	6.8	3.4	1.2	0.3	37.7	100.0
KR804	-	3,381	341	1700-1800	49.9	7.2	4.6	0.5	0.4	37.3	100.0
KR805	-	16,845	1,472	1800-1900	47.7	6.8	3.0	0.6	0.3	41.6	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kedah

AVERAGE 2016

District : KOTA SETAR - PADANG TERAP

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
KR101	54,311	4,710	65.7	9.4	1.7	1.2	0.2	21.8	100%	D	2024
KR102	26,755	2,952	60.0	6.0	4.3	1.3	0.5	28.0	100%	A	2041
KR103	17,873	1,696	55.9	4.3	4.8	1.1	0.6	33.4	100%	E	2025
KR104	7,209	718	50.0	5.8	5.3	1.2	0.3	37.4	100%	A	2045
KR105	34,867	3,071	73.7	6.3	2.4	0.7	0.2	16.6	100%	A	2046
KR106	27,313	2,320	62.3	9.3	2.2	1.2	0.2	24.9	100%	A	2065
KR107	39,136	4,513	67.6	8.0	4.7	2.7	0.2	16.9	100%	E	2019
KR108	39,302	3,326	64.2	5.5	2.1	0.4	1.5	26.2	100%	A	2076
KR109	31,501	3,237	52.5	7.3	1.0	0.6	0.2	38.4	100%	F	R
KR110	21,275	2,164	60.3	6.9	5.0	2.8	0.6	24.3	100%	F	R
KR111	18,144	1,678	55.7	8.3	5.1	5.1	0.7	25.1	100%	F	R

District : KUBANG PASU

KR201	31,898	3,106	63.6	6.2	2.3	0.5	0.4	27.1	100%	A	2063
KR202	38,036	3,793	62.3	5.3	2.2	0.4	0.2	29.6	100%	B	-
KR203	20,115	2,285	65.4	6.2	2.6	6.2	1.2	18.4	100%	A	-
KR204	15,175	1,750	62.8	6.4	2.9	0.6	0.1	27.2	100%	A	2110
KR205	18,294	2,408	59.7	5.6	1.9	0.3	0.2	32.3	100%	A	-
KR206	8,285	821	56.3	5.0	4.3	0.8	0.1	33.7	100%	A	2097

District : KUALA MUDA - SIK

KR401	21,656	1,952	62.3	5.0	4.9	1.0	0.3	26.6	100%	E	2016
KR402	45,430	3,782	58.7	7.5	4.7	2.4	0.4	26.3	100%	C	2053
KR403	27,150	2,472	65.0	8.9	3.8	2.3	0.6	19.4	100%	A	2052
KR404	14,405	1,400	46.4	8.0	5.0	3.2	0.3	37.1	100%	C	2028
KR405	20,452	2,118	57.5	10.8	4.9	3.0	0.3	23.5	100%	A	2066
KR406	4,225	393	45.1	9.9	7.7	9.9	0.5	26.9	100%	A	2037
KR407	8,366	799	47.1	7.3	4.3	2.3	1.1	38.0	100%	A	2034
KR408	12,559	1,151	52.5	7.3	3.1	1.1	0.7	35.3	100%	A	2034

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Kedah

AVERAGE 2016

District : PENDANG - YAN

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
KR501	18,221	1,760	59.3	6.6	6.2	3.6	0.5	23.8	100%	F	R
KR502	8,516	881	63.3	6.5	4.2	0.8	0.0	25.1	100%	A	2070
KR503	7,401	647	47.9	10.2	6.3	5.6	0.3	29.8	100%	A	2073
KR504	10,892	1,019	54.7	4.9	5.8	3.1	0.3	31.1	100%	B	2030
KR505	11,445	1,037	52.8	3.7	4.7	1.5	0.1	37.2	100%	A	-
KR506	5,644	639	43.5	3.5	3.3	0.8	0.0	48.9	100%	A	2027
KR507	7,633	769	46.4	10.6	4.5	4.5	0.0	34.0	100%	A	2026

District : BALING

KR601	12,593	1,124	54.0	8.1	4.7	1.5	1.0	30.7	100%	A	2038
KR602	24,396	2,098	68.2	5.7	2.8	0.2	0.6	22.4	100%	F	R
KR603	9,758	889	54.1	7.7	4.1	0.6	0.9	32.5	100%	A	2062
KR604	8,177	904	41.3	6.7	4.3	0.4	0.3	47.0	100%	A	2026
KR605	7,527	809	51.4	10.8	9.9	5.1	1.0	21.7	100%	A	2028

District : KULIM - BANDAR BAHARU

KR701	39,434	4,176	61.4	6.3	2.8	1.0	0.2	28.3	100%	C	2026
KR702	44,203	5,205	63.8	3.5	2.9	0.7	0.4	28.8	100%	D	2022
KR703	29,960	3,003	71.4	3.3	1.6	0.4	0.3	23.0	100%	A	2051
KR704	16,328	1,798	52.2	6.1	4.1	1.4	0.9	35.4	100%	F	R
KR705	30,938	2,821	66.1	3.2	2.4	0.6	0.6	27.1	100%	A	-
KR706	17,510	1,923	51.5	6.6	4.1	1.4	0.4	36.1	100%	A	2032
KR707	20,838	2,980	58.3	6.8	4.1	2.0	0.4	28.5	100%	F	R
KR708	4,385	424	44.4	11.5	8.4	3.2	1.0	31.4	100%	A	2153
KR709	10,419	1,085	53.3	6.2	8.2	3.6	1.8	26.9	100%	B	2060
KR710	19,861	3,115	57.2	5.1	5.7	2.4	0.5	29.0	100%	F	R

District : LANGKAWI

KR801	35,740	2,951	28.9	8.6	4.2	1.2	0.7	24.3	100%	A	2026
KR802	15,763	1,318	54.1	7.7	4.2	1.1	0.6	32.2	100%	B	2025
KR803	11,523	1,225	46.4	7.1	3.9	1.8	0.5	40.2	100%	B	2025
KR804	3,877	385	49.1	8.5	4.7	1.7	0.8	35.2	100%	A	2040
KR805	18,869	1,658	47.2	7.0	3.3	1.0	0.6	40.9	100%	D	2020

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Kedah

District : KOTA SETAR - PADANG TERAP

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
KR101	39,774	48,051	47,342	42,729	46,813	42,213	46,801	54,634	55,909	54,311	2.9	0.56
KR102	22,060	23,222	22,512	26,056	22,888	23,422	29,246	25,587	29,875	26,755	2.7	0.57
KR103	17,988	17,076	13,741	14,362	19,143	14,737	21,353	17,789	15,940	17,873	1.0	0.05
KR104	4,435	4,879	4,876	5,785	7,277	5,719	6,416	4,979	5,433	7,209	3.2	0.33
KR105	31,690	30,227	31,710	35,308	27,783	33,955	37,715	38,710	37,417	34,867	2.3	0.41
KR106	21,010	26,310	24,987	21,887	21,717	24,217	25,894	25,197	26,817	27,313	1.9	0.37
KR107	36,560	30,201	33,415	39,139	38,074	41,811	46,195	45,140	39,654	39,136	2.8	0.43
KR108	40,960	40,252	41,077	43,602	45,001	45,944	44,954	45,114	40,335	39,302	0.1	0.00
KR109	26,928	33,926	28,343	33,589	26,744	32,255	28,764	27,154	32,632	31,501	0.4	0.02
KR110	31,575	31,067	28,433	28,137	23,023	24,145	23,108	21,379	21,374	21,275	-4.9	0.91
KR111	29,060	20,024	23,290	24,572	24,310	21,367	18,226	24,533	18,361	18,144	-3.4	0.42

District : KUBANG PASU

KR201	30,704	29,717	28,501	30,253	28,098	34,230	36,690	36,720	29,834	31,898	1.5	0.21
KR202	37,093	51,314	34,715	30,402	32,311	42,822	47,474	34,003	39,660	38,036	0.0	0.00
KR203	23,135	25,426	26,608	21,873	21,549	22,093	25,439	20,458	21,373	20,115	-2.0	0.39
KR204	15,071	13,521	14,204	12,841	14,174	18,542	18,806	15,486	13,730	15,175	1.2	0.08
KR205	21,550	16,419	16,949	18,328	17,803	22,273	15,186	12,432	16,509	18,294	-2.0	0.13
KR206	7,557	8,289	12,630	5,318	7,708	6,797	15,761	8,136	8,192	8,285	1.0	0.01

District : KUALA MUDA - SIK

KR401	20,596	16,123	19,052	24,002	22,195	23,141	23,971	23,672	24,779	21,656	2.8	0.40
KR402	43,928	43,949	43,741	42,989	41,858	42,018	44,288	45,565	42,823	45,430	0.3	0.07
KR403	23,429	22,722	26,231	23,337	22,551	24,494	27,266	26,565	27,263	27,150	2.0	0.55
KR404	10,957	11,624	12,162	13,942	13,483	13,291	13,715	13,623	13,359	14,405	2.4	0.68
KR405	17,255	18,631	19,097	20,697	21,254	20,640	21,416	23,458	19,570	20,452	1.8	0.41
KR406	2,296	2,834	3,392	4,295	4,511	4,578	4,820	4,542	4,573	4,225	6.5	0.62
KR407	5,616	5,257	5,869	8,082	8,134	7,324	7,862	8,217	8,044	8,366	4.9	0.68
KR408	8,477	8,088	8,861	8,631	10,055	9,649	9,458	9,374	9,666	12,559	3.2	0.64

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Kedah

District : PENDANG - YAN

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
KR501	21,206	17,586	19,169	19,387	19,618	19,249	18,853	17,797	19,854	18,221	-0.6	0.11
KR502	8,419	7,151	8,979	9,539	9,261	7,551	9,584	9,438	9,777	8,516	1.4	0.16
KR503	6,529	5,846	6,338	6,612	6,229	5,982	7,111	6,215	6,948	7,401	1.5	0.34
KR504	8,523	7,246	10,173	9,157	6,569	9,193	9,813	9,601	10,982	10,892	3.3	0.35
KR505	11,388	10,737	8,429	8,516	7,201	7,678	8,394	9,467	9,245	11,445	-0.2	0.00
KR506	-	-	-	-	-	3,975	3,554	6,158	5,259	5,644	10.9	0.54
KR507	-	-	-	-	-	5,631	5,552	6,377	7,008	7,633	8.4	0.93

District : BALING

KR601	10,470	10,119	10,675	10,707	11,404	10,718	12,104	11,807	12,503	12,593	2.4	0.85
KR602	20,412	21,386	22,286	22,612	18,731	38,641	21,934	22,592	22,645	24,396	1.6	0.07
KR603	8,622	8,491	8,287	9,122	9,245	9,353	11,005	9,499	9,231	9,758	1.8	0.45
KR604	4,686	2,876	5,966	6,265	6,248	6,701	7,569	7,580	8,175	8,177	8.6	0.67
KR605	5,452	5,745	6,717	7,277	7,926	10,322	9,864	9,109	9,926	7,527	5.7	0.58

District : KULIM - BANDAR BAHARU

KR701	23,848	25,051	31,792	32,514	28,866	28,326	31,797	32,196	31,656	39,434	3.7	0.62
KR702	37,569	36,922	37,711	31,213	34,851	41,465	40,665	46,061	43,516	44,203	2.8	0.50
KR703	21,918	25,013	28,158	30,188	27,994	30,128	30,948	26,691	26,614	29,960	1.9	0.29
KR704	11,457	11,409	13,135	13,728	14,695	14,007	14,474	15,091	16,238	16,328	3.9	0.90
KR705	36,617	33,132	36,056	32,223	35,762	38,518	38,560	38,995	34,769	30,938	-0.1	0.00
KR706	10,175	11,204	14,030	16,113	16,446	15,548	17,987	18,556	20,440	17,510	6.5	0.79
KR707	11,274	12,456	13,810	13,935	14,510	14,422	16,186	14,664	16,301	20,838	4.9	0.82
KR708	3,778	6,125	4,289	4,298	4,295	4,530	4,851	4,759	4,452	4,385	0.0	0.00
KR709	7,904	8,095	17,090	8,486	9,479	9,896	10,458	10,493	8,334	10,419	0.6	0.01
KR710	13,552	14,426	17,644	15,148	16,853	14,529	15,544	14,020	15,756	19,861	1.7	0.20

District : LANGKAWI

KR801	20,405	20,936	22,049	22,918	24,412	25,641	26,422	31,009	32,875	35,740	6.3	0.96
KR802	10,164	10,561	11,659	12,051	11,346	13,376	13,420	14,220	13,834	15,763	4.4	0.92
KR803	7,044	7,726	7,873	9,611	8,454	9,358	11,272	9,917	11,460	11,523	5.4	0.86
KR804	3,003	2,729	2,890	3,095	3,148	12,722	9,638	3,682	4,100	3,877	6.8	0.15
KR805	11,593	12,322	11,901	12,471	13,837	14,135	15,773	16,934	17,505	18,869	5.7	0.96

STATISTIC FOR YEAR 2016

State : Kedah

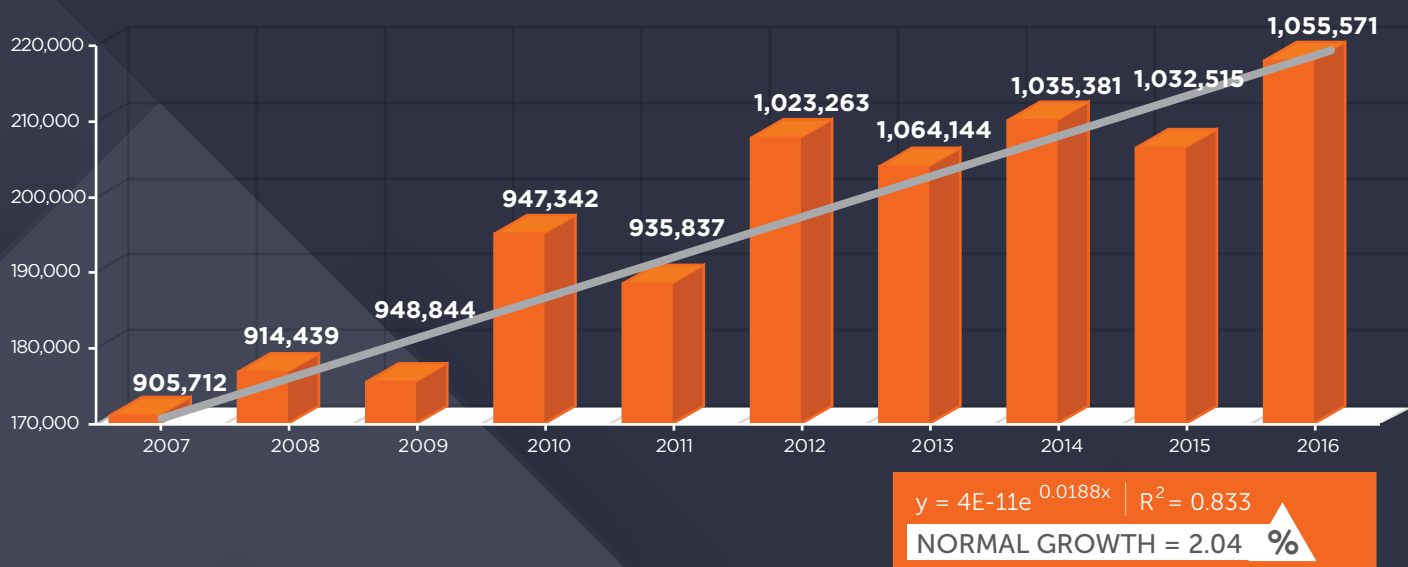




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Kedah



KEDAH

There are 52 census stations in Kedah where the 16-hour traffic volume demonstrates that the year 2013 possessed the highest traffic volume with 1,064,144 vehicles since the year 2007 until 2016. Between 2015 and 2016, there was a rise of 2.32% vehicles.

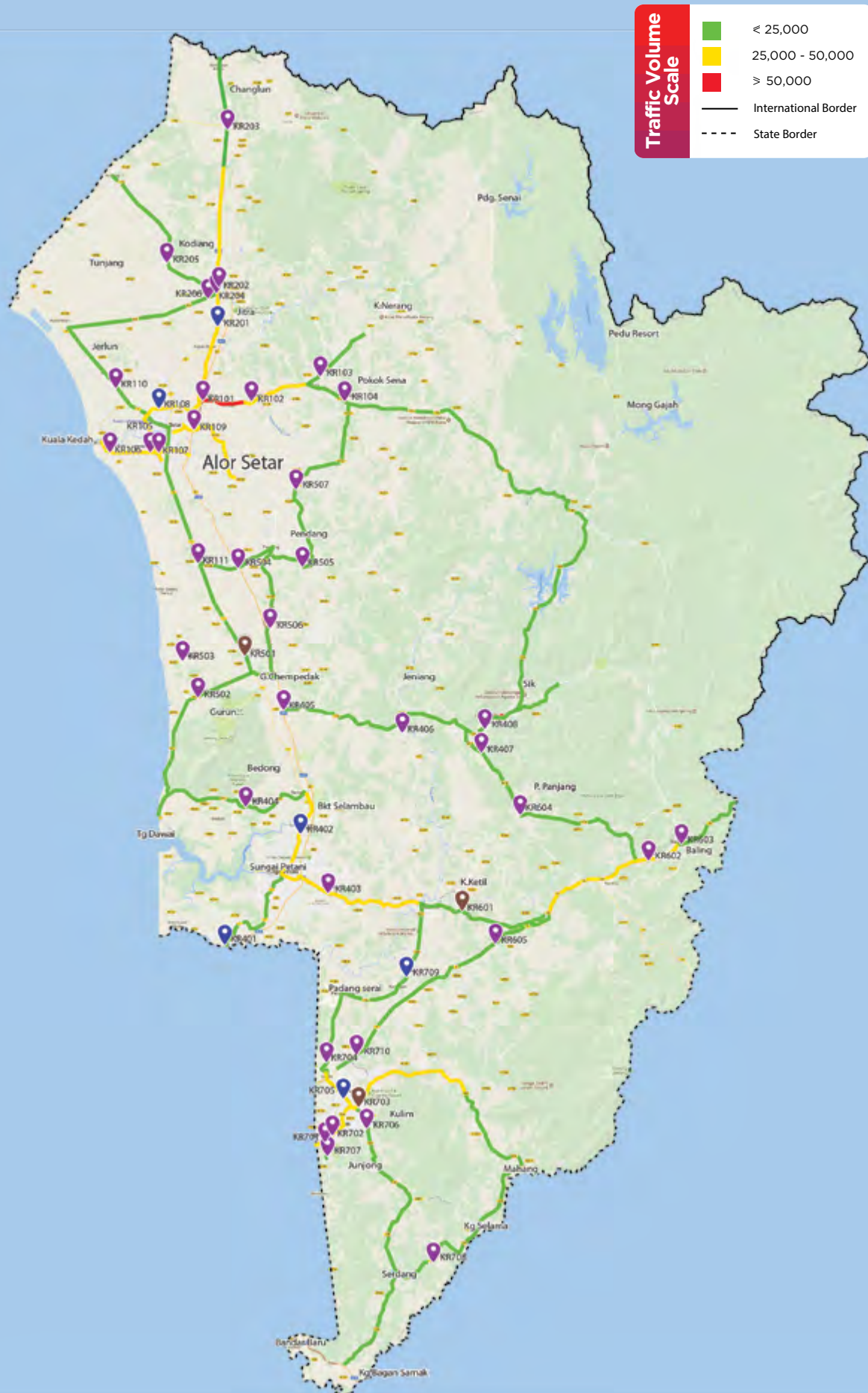


**2.32%
INCREASE**

For the year 2016, the observed traffic growth rate for the state of Kedah is 2.04%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Kedah.

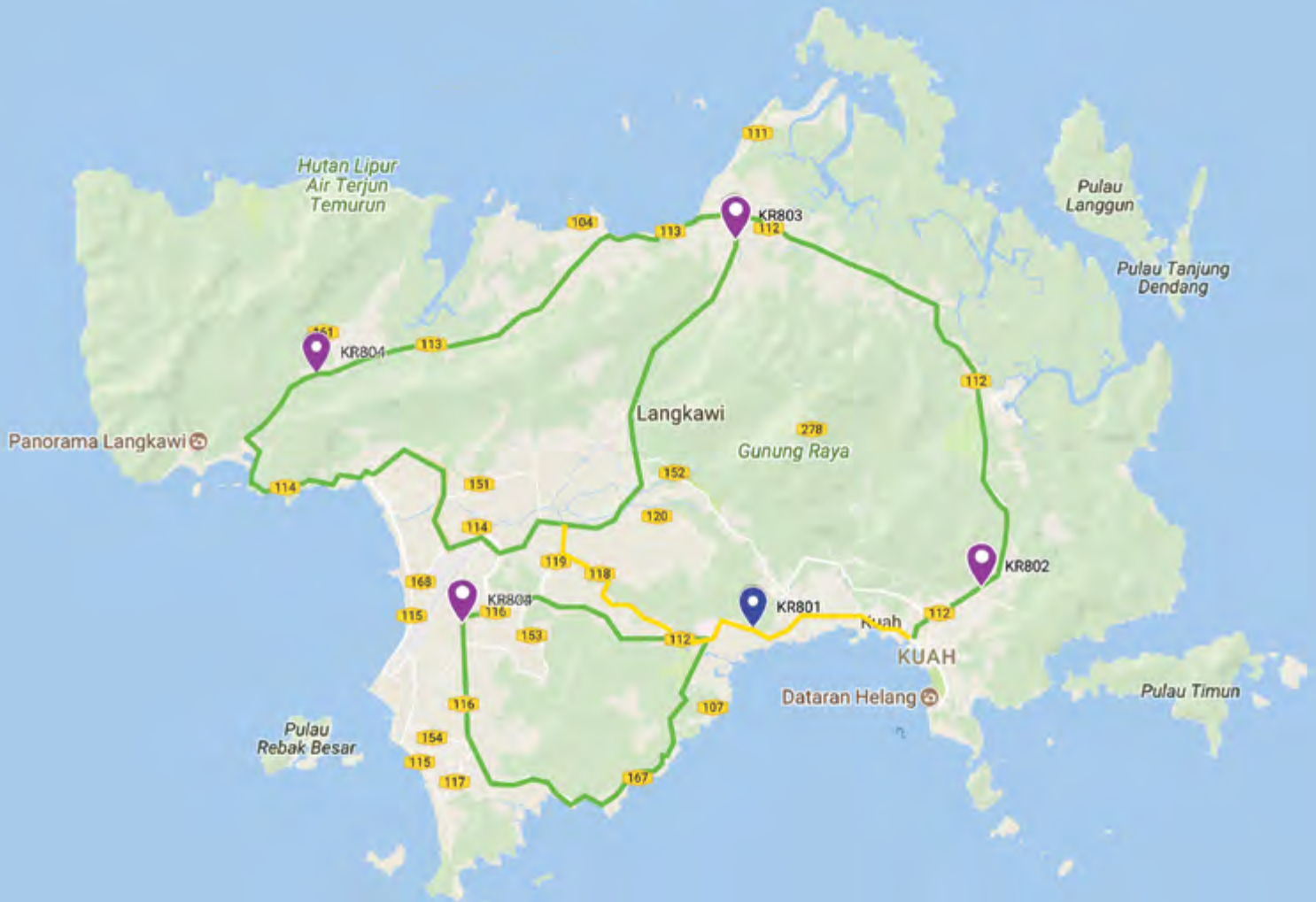
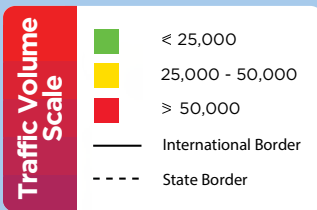
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Kedah



AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Langkawi





PULAU PINANG

The Bridge Connecting Nangka Road with Perda Timur Road, SPT

- Perda Town, Seberang Perai Tengah
- 2016

- 1) Roads and bridges with four 2-way lanes
- 2) With this project, journey time is shortened, at:-
 - a) Crossing Padang Lalang Road
 - b) Bukit Mertajam Railway Track
 - c) Crossing Permatang Rawa Road

Road Length: 4356.59 KM

- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION & LOS MAP

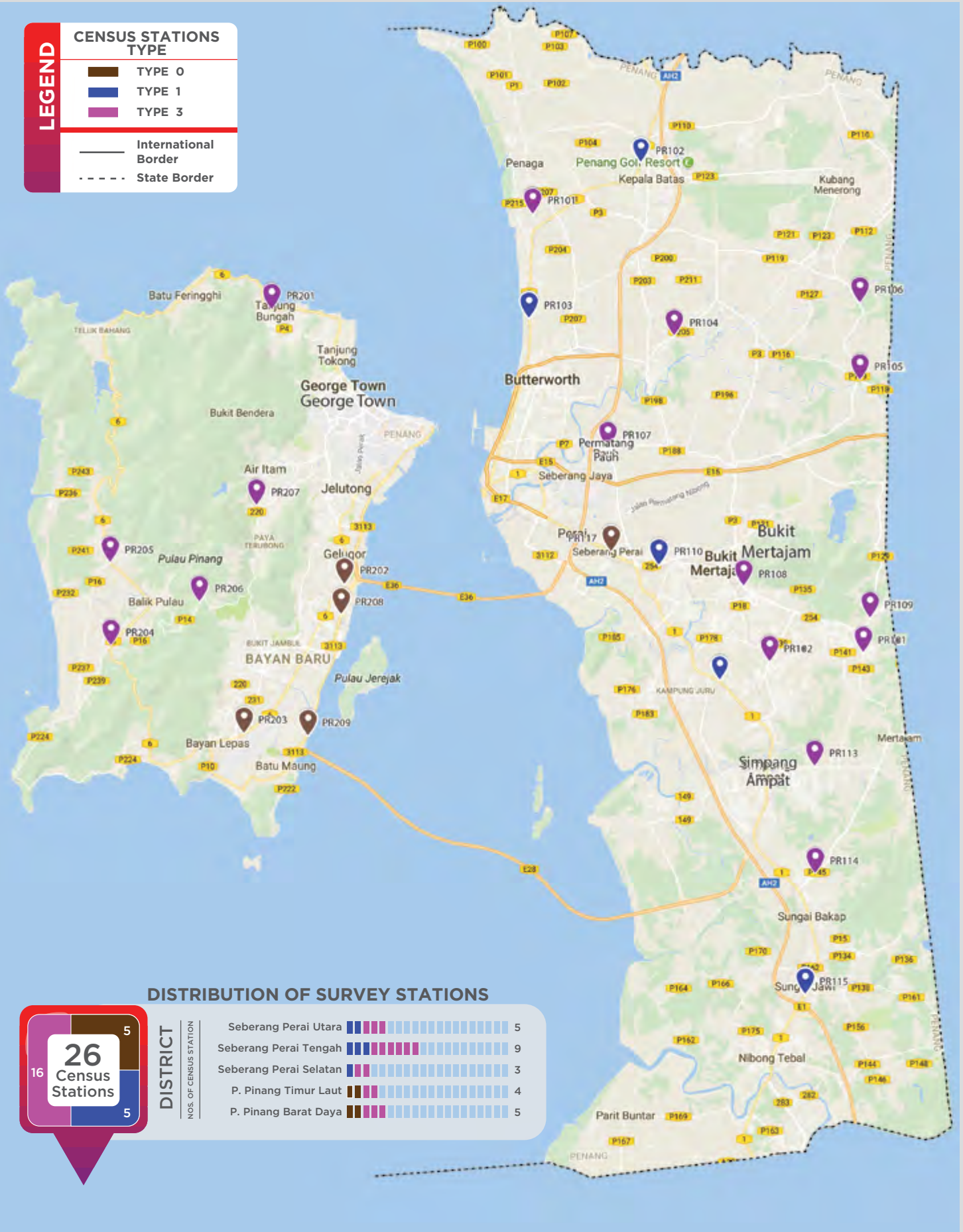
State : Pulau Pinang

LEGEND

CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



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 (WGS84) (Latitude, Longitude)		Type of Carriageway
PR101	3	P1	12.9	Titi Mukim - Permatang Bendahari	5.5033720	100.3843400	T 1-1
PR102	1	1	19.0	Butterworth - Kepala Batas - Sungai Petani	5.5228330	100.4272500	T 1-1
PR103	1	1	8.1	Butterworth - Bagan Ajam - Telok Ayer Tawar	5.4620660	100.3828890	T 1-1
PR104	3	P198	12.1	Butterworth - Sungai Dua - Lahar Yoi	5.4548333	100.4405556	T 1-1
PR105	3	P118	25.4	100m from Ara Kuda - Lunas junction	5.4376389	100.5140833	T 1-1

District : SEBERANG PERAI TENGAH

PR106	3	P119	21.7	Butterworth - Kubang Ulu - Ara Kuda	5.4681111	100.5140556	T 1-1
PR107	3	P188	8.1	Butterworth - Permatang Pauh - Kubang Semang	5.4106220	100.4141390	T 1-1
PR108	3	P12	20.9	Butterworth - Bukit Mertajam - Kulim	5.3558611	100.4680278	T 1-1
PR109	3	P12	15.8	Butterworth - Bukit Mertajam - Kulim	5.3436944	100.5180278	T 1-1
PR110	1	P12	9.7	Butterworth - Bukit Mertajam	5.3647330	100.4345280	T 2-2
PR111	3	P143	20.9	B'worth - Bukit Mertajam - Junjong (through Machang Bubok - Tasek)	5.3297500	100.5154830	T 1-1
PR112	3	P139	3.2	From junction to Route 1 (Jalan Rozhan)	5.3264000	100.4780830	T 2-2
PR116	1	1	16.9	Butterworth - Taiping	5.3188330	100.4585830	T 1-1
PR117	0	1	8.1	Butterworth - Taiping (through Prai)	5.3698230	100.4155110	K 2-2

District : SEBERANG PERAI SELATAN

PR113	3	P124	24.2	Butterworth - Simpang Empat - Tasek	5.2851667	100.4961389	T 1-1
PR114	3	P145	30.6	Butterworth - Tasek - Val D'or	5.2427500	100.4962500	T 1-1
PR115	1	1	32.2	Butterworth - Taiping	5.1948890	100.4920830	T 1-1

District : PULAU PINANG TIMUR LAUT

PR201	3	6	11.1	George Town - Telok Bahang (Jalan Keliling Pulau)	5.4655833	100.2807778	K 2-2
PR202	0	6	65.5	George Town - Bayan Lepas - Gelugor (Jalan Keliling Pulau)	5.3573240	100.3099360	K 2-2
PR207	3	220	11.0	Paya Terubong - Ayer Hitam	5.3882500	100.2746944	T 1-1
PR208	0	3113	0.5	Lebuhraya Lim Cheong Eu	5.3449030	100.3081280	K 3-3

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Pulau Pinang

District : SEBERANG PERAI BARAT DAYA

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
PR203	0	6	57.2	George Town - Bayan Lepas - Gelugor	5.2981590	100.2697980	K 3-3
PR204	3	6	45.1	George Town - Balik Pulau - Teluk Kumbar (Jalan Keliling Pulau)	5.3327370	100.2170020	T 1-1
PR205	3	6	38.6	George Town - Telok Bahang - Balik Pulau (Jalan Keliling Pulau)	5.3654880	100.2167810	T 1-1
PR206	3	P14	16.9	Jalan Tun Saadon	5.3500440	100.2524000	T 1-1
PR209	0	3113	7.0	Lebuhraya Bayan Lepas (Georgetown - Batu Maung)	5.3176780	100.3009180	K 3-3

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Pulau Pinang

APRIL 2016

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	Busses	Motorcycles	Total
PR101	-	7,718	811	1800-1900	45.1	2.5	1.3	0.5	0.8	49.8	100.0
PR102	-	17,370	1,621	1800-1900	56.0	2.6	3.2	0.6	0.6	37.1	100.0
PR103	-	34,935	3,213	1800-1900	58.7	2.0	2.1	0.3	0.6	36.2	100.0
PR104	-	27,957	3,328	0700-0800	48.7	3.6	3.3	1.6	0.7	42.1	100.0
PR105	-	12,913	1,568	1800-1900	61.6	4.0	4.2	2.0	0.3	27.9	100.0

District : SEBERANG PERAI TENGAH

PR106	-	8,248	934	1800-1900	56.5	7.7	8.9	1.9	0.4	24.6	100.0
PR107	-	22,840	2,312	1900-2000	57.9	2.3	1.4	1.6	0.5	36.3	100.0
PR108	-	53,020	4,688	1700-1800	69.3	6.3	2.8	0.3	0.3	21.0	100.0
PR109	-	47,155	5,320	0700-0800	66.3	6.2	3.8	1.1	0.3	22.3	100.0
PR110	-	43,471	3,406	1700-1800	61.7	7.0	2.9	0.7	0.6	27.1	100.0
PR111	-	3,190	356	0700-0800	46.8	14.8	7.7	1.3	0.2	29.2	100.0
PR112	-	50,429	4,114	1800-1900	71.2	4.7	2.6	0.9	0.2	20.4	100.0
PR116	-	62,075	5,363	1800-1900	57.2	7.3	5.2	1.9	0.6	27.7	100.0
PR117	112,872	107,206	10,693	0700-0800	63.8	4.8	4.0	1.0	0.5	25.9	100.0

District : SEBERANG PERAI SELATAN

PR113	-	23,197	2,069	0700-0800	44.0	8.7	6.4	3.6	0.2	37.2	100.0
PR114	-	12,161	1,058	1700-1800	41.4	8.5	13.6	4.3	0.7	31.6	100.0
PR115	-	41,274	3,296	0700-0800	55.5	6.5	6.3	2.3	0.7	28.7	100.0

District : SEBERANG PERAI TIMUR LAUT

PR201	-	26,700	5,565	1700-1800	68.8	5.0	2.7	0.5	1.3	21.7	100.0
PR202	82,376	73,651	11,300	1800-1900	65.9	1.1	1.7	0.2	0.7	30.4	100.0
PR207	-	33,465	2,845	1800-1900	54.2	1.2	1.9	0.1	0.9	41.7	100.0
PR208	138,194	123,364	10,801	0700-0800	77.7	2.7	2.6	0.9	0.8	15.4	100.0

District : SEBERANG PERAI BARAT DAYA

PR203	65,734	57,423	5,857	0600-0700	53.8	2.5	2.6	0.4	2.0	38.6	100.0
PR204	-	18,999	1,833	0700-0800	43.1	5.7	5.4	0.9	2.6	42.3	100.0
PR205	-	11,805	1,360	0700-0800	45.9	2.3	2.5	0.1	0.6	48.7	100.0
PR206	-	14,141	1,489	0700-0800	49.0	4.4	2.1	0.4	0.7	43.4	100.0
PR209	50,655	47,625	6,615	0700-0800	60.0	5.3	4.0	1.3	1.4	28.0	100.0

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Pulau Pinang

OCTOBER 2016

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	Busses	Motorcycles	Total
PR101	-	7,865	901	0700-0800	45.9	2.1	1.7	0.6	1.0	48.7	100.0
PR102	-	19,422	1,807	1800-1900	58.7	3.8	3.8	0.4	0.6	32.7	100.0
PR103	-	34,304	3,465	0700-0800	63.1	1.6	1.6	0.5	0.4	32.8	100.0
PR104	-	31,674	3,499	0700-0800	50.2	3.2	4.1	1.6	0.7	40.1	100.0
PR105	-	12,918	1,408	1700-1800	63.1	2.5	6.9	2.0	0.3	25.1	100.0

District : SEBERANG PERAI TENGAH

PR106	-	7,166	653	0700-0800	49.0	11.4	9.0	1.6	0.4	28.7	100.0
PR107	-	21,647	4,057	0700-0800	46.2	5.3	4.6	2.1	0.4	41.5	100.0
PR108	-	51,889	4,604	1300-1400	66.6	3.7	1.4	0.4	0.4	27.4	100.0
PR109	-	38,098	4,127	0700-0800	63.2	5.4	3.9	1.1	0.3	26.2	100.0
PR110	-	45,861	3,671	1700-1800	61.8	7.7	2.4	0.6	0.6	27.0	100.0
PR111	-	3,213	459	0800-0900	50.2	10.8	5.4	2.1	0.1	31.3	100.0
PR112	-	42,001	4,009	1300-1400	69.8	5.0	3.6	1.2	0.2	20.3	100.0
PR116	-	56,565	5,452	1800-1900	59.9	7.9	6.4	1.7	0.8	23.4	100.0
PR117	125,883	118,065	11,521	1800-1900	66.2	4.7	3.9	0.9	0.4	23.9	100.0

District : SEBERANG PERAI SELATAN

PR113	-	25,485	2,533	1800-1900	44.6	7.1	5.1	2.8	0.4	40.2	100.0
PR114	-	11,651	1,045	0700-0800	40.2	15.7	12.9	5.3	0.5	25.4	100.0
PR115	-	41,344	3,342	1700-1800	58.1	6.4	6.6	1.9	0.7	26.2	100.0

District : SEBERANG PERAI TIMUR LAUT

PR201	-	19,809	2,683	1800-1900	60.5	6.0	3.3	0.9	1.6	27.7	100.0
PR202	73,779	65,261	5,796	1800-1900	66.9	0.8	1.6	0.2	0.8	29.6	100.0
PR207	-	30,585	2,716	0800-0900	58.6	1.0	2.5	0.2	1.3	36.4	100.0
PR208	142,757	126,888	10,369	1300-1400	79.8	2.5	2.4	0.8	0.6	13.9	100.0

District : SEBERANG PERAI BARAT DAYA

PR203	63,155	55,933	6,259	1800-1900	59.3	2.6	2.3	0.5	1.3	34.0	100.0
PR204	-	14,675	1,703	1800-1900	49.2	3.5	3.0	0.3	1.4	42.7	100.0
PR205	-	14,622	1,573	1700-1800	49.6	4.0	3.3	0.3	0.8	42.0	100.0
PR206	-	7,912	941	0800-0900	56.5	6.5	2.7	0.4	1.1	32.7	100.0
PR209	45,489	42,511	6,478	0700-0800	62.9	3.2	4.1	0.8	1.6	27.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Pulau Pinang

AVERAGE 2016

District : SEBERANG PERAI UTARA

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
PR101	7,792	856	45.5	2.3	1.5	0.5	0.9	49.2	100%	A	2089
PR102	18,396	1,714	57.4	3.2	3.5	0.5	0.6	34.9	100%	C	2051
PR103	34,619	3,339	60.9	1.8	1.8	0.4	0.5	34.5	100%	F	R
PR104	29,816	3,414	49.4	3.4	3.7	1.6	0.7	41.1	100%	F	R
PR105	12,916	1,488	62.4	3.2	5.5	2.0	0.3	26.5	100%	B	2054

District : SEBERANG PERAI TENGAH

PR106	7,707	794	52.8	9.5	8.9	1.7	0.4	26.6	100%	A	-
PR107	22,244	3,185	52.1	3.8	3.0	1.8	0.5	38.9	100%	F	R
PR108	52,455	4,646	68.0	5.0	2.1	0.4	0.4	24.2	100%	F	R
PR109	42,627	4,724	64.8	5.8	3.8	1.1	0.3	24.2	100%	F	R
PR110	44,666	3,539	61.7	7.3	2.6	0.7	0.6	27.0	100%	E	-
PR111	3,202	408	48.5	12.8	6.6	1.7	0.1	30.2	100%	A	-
PR112	46,215	4,062	70.5	4.8	3.1	1.1	0.2	20.3	100%	F	R
PR116	59,320	5,408	58.6	7.6	5.8	1.8	0.7	25.5	100%	F	R
PR117	112,635	11,107	65.0	4.7	3.9	1.0	0.5	24.9	100%	F	R

District : SEBERANG PERAI SELATAN

PR113	24,341	2,301	44.3	7.9	5.7	3.2	0.3	38.7	100%	F	R
PR114	11,906	1,052	40.8	12.1	13.3	4.8	0.6	28.5	100%	C	-
PR115	41,309	3,319	56.8	6.4	6.5	2.1	0.7	27.5	100%	F	R

District : SEBERANG PERAI TIMUR LAUT

PR201	23,255	4,124	64.6	5.5	3.0	0.7	1.4	24.7	100%	C	2040
PR202	69,456	8,548	66.4	1.0	1.6	0.2	0.8	30.0	100%	F	R
PR207	32,025	2,781	56.4	1.1	2.2	0.1	1.1	39.1	100%	F	R
PR208	125,126	10,585	78.7	2.6	2.5	0.8	0.7	14.7	100%	F	R

District : SEBERANG PERAI BARAT DAYA

PR203	56,678	6,058	56.6	2.5	2.5	0.5	1.7	36.3	100%	A	2028
PR204	16,837	1,768	46.1	4.6	4.2	0.6	2.0	42.5	100%	D	2017
PR205	13,214	1,467	47.7	3.1	2.9	0.2	0.7	45.3	100%	C	2036
PR206	11,027	1,215	52.8	5.4	2.4	0.4	0.9	38.1	100%	A	-
PR209	45,068	6,547	61.4	4.2	4.0	1.0	1.5	27.8	100%	C	-

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Pulau Pinang

District : SEBERANG PERAI UTARA

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
PR101	6,494	7,616	7,485	7,187	6,652	7,650	7,432	8,681	6,688	7,792	1.0	0.13
PR102	18,017	18,037	18,035	20,746	20,478	20,738	21,200	19,453	18,230	18,396	0.4	0.04
PR103	27,390	37,454	37,590	42,788	33,928	31,303	31,130	34,966	34,613	34,619	0.1	0.00
PR104	23,075	24,703	23,855	24,469	25,815	24,670	26,257	27,494	27,980	29,816	2.5	0.87
PR105	11,618	12,446	11,134	12,205	12,757	11,339	12,690	13,996	10,710	12,916	0.6	0.06

District : SEBERANG PERAI TENGAH

PR106	12,981	13,369	11,998	10,757	12,293	13,530	13,716	9,564	10,955	7,707	-3.9	0.41
PR107	8,256	8,260	8,666	10,353	10,553	9,921	12,143	13,952	22,437	22,244	11.3	0.85
PR108	30,425	22,605	31,712	30,706	46,409	45,483	43,724	49,981	44,252	52,455	7.8	0.73
PR109	41,880	34,363	37,012	24,609	45,895	45,001	52,655	52,986	49,173	42,627	4.1	0.28
PR110	48,913	50,214	48,730	52,129	49,765	41,678	44,632	43,738	37,662	44,666	-2.4	0.54
PR111	4,430	4,560	5,829	4,943	3,455	4,345	4,003	4,517	3,924	3,202	-3.4	0.36
PR112	36,748	37,081	29,947	23,488	36,876	33,210	39,050	39,358	41,603	46,215	3.4	0.30
PR116	47,787	53,451	56,601	56,349	60,230	56,932	64,993	48,588	65,716	59,320	1.8	0.27
PR117	89,591	78,171	89,263	95,869	102,391	117,380	132,813	161,699	128,962	112,635	5.9	0.64

District : SEBERANG PERAI SELATAN

PR113	15,724	15,302	20,160	19,887	21,811	24,090	28,563	27,542	20,751	24,341	5.3	0.60
PR114	15,978	11,713	11,523	14,544	13,017	9,923	9,898	10,279	13,015	11,906	-2.4	0.20
PR115	34,400	35,236	35,062	37,548	39,617	43,137	44,684	44,249	42,148	41,309	2.8	0.73

District : SEBERANG PERAI TIMUR LAUT

PR201	23,061	24,392	24,799	27,334	26,085	28,442	27,106	28,419	24,774	23,255	0.6	0.05
PR202	77,112	73,316	75,234	81,717	82,488	91,517	81,583	72,034	67,613	69,456	-1.0	0.11
PR207	25,067	24,982	15,175	27,213	29,440	32,807	31,036	27,676	32,022	32,025	4.5	0.36
PR208	96,142	161,094	106,482	99,652	107,749	100,205	100,571	92,251	97,112	125,126	-1.2	0.05

District : SEBERANG PERAI BARAT DAYA

PR203	40,757	43,232	47,285	50,776	50,950	59,900	62,207	63,049	62,464	56,678	4.7	0.80
PR204	7,426	7,191	8,155	8,281	8,693	10,637	11,519	13,674	18,614	16,837	10.8	0.92
PR205	9,391	9,714	12,042	12,283	9,725	9,846	11,296	9,487	10,843	13,214	1.5	0.13
PR206	12,642	12,751	13,326	16,634	12,835	9,229	12,942	12,417	12,493	11,027	-1.7	0.12
PR209	52,437	62,145	57,620	60,108	62,253	60,415	63,543	60,502	54,699	45,068	-1.1	0.11

STATISTIC FOR YEAR 2016

State : Pulau Pinang

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

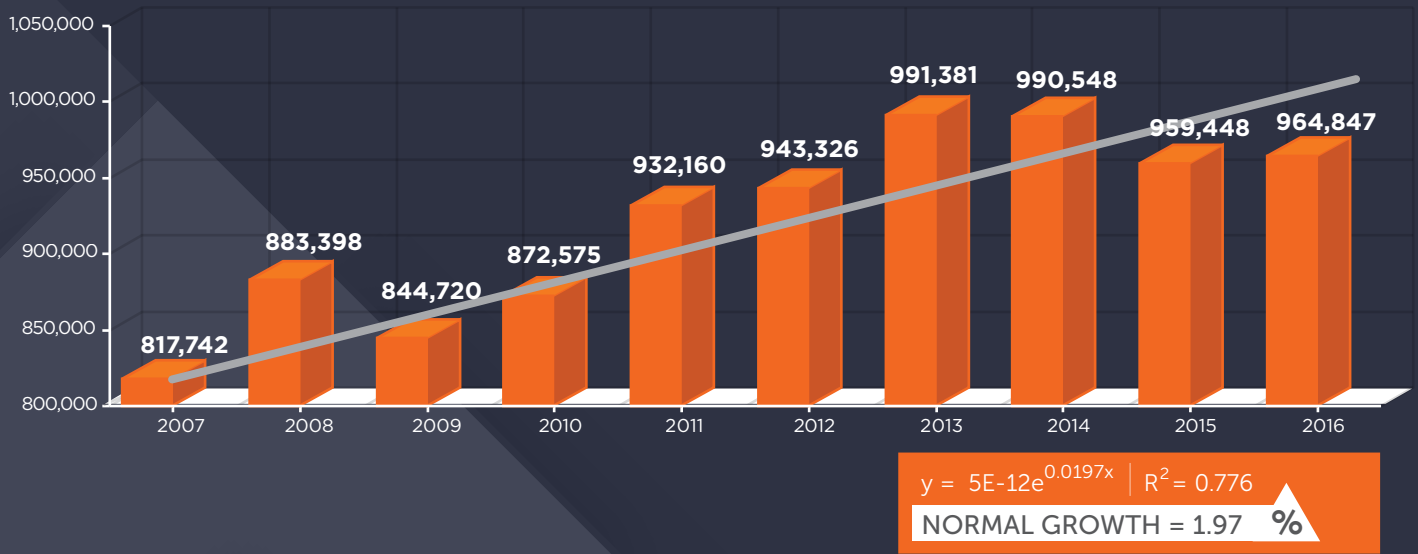
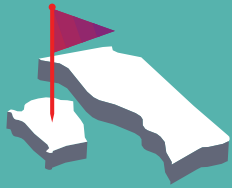


Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Penang



P. PINANG

For Pulau Pinang, there are 26 census stations. The 16-hour traffic volume displays the increase of vehicles for the year 2008 but dropped slightly in the following year. However, the traffic volume has increased 0.56% from the year 2015 to 2016.

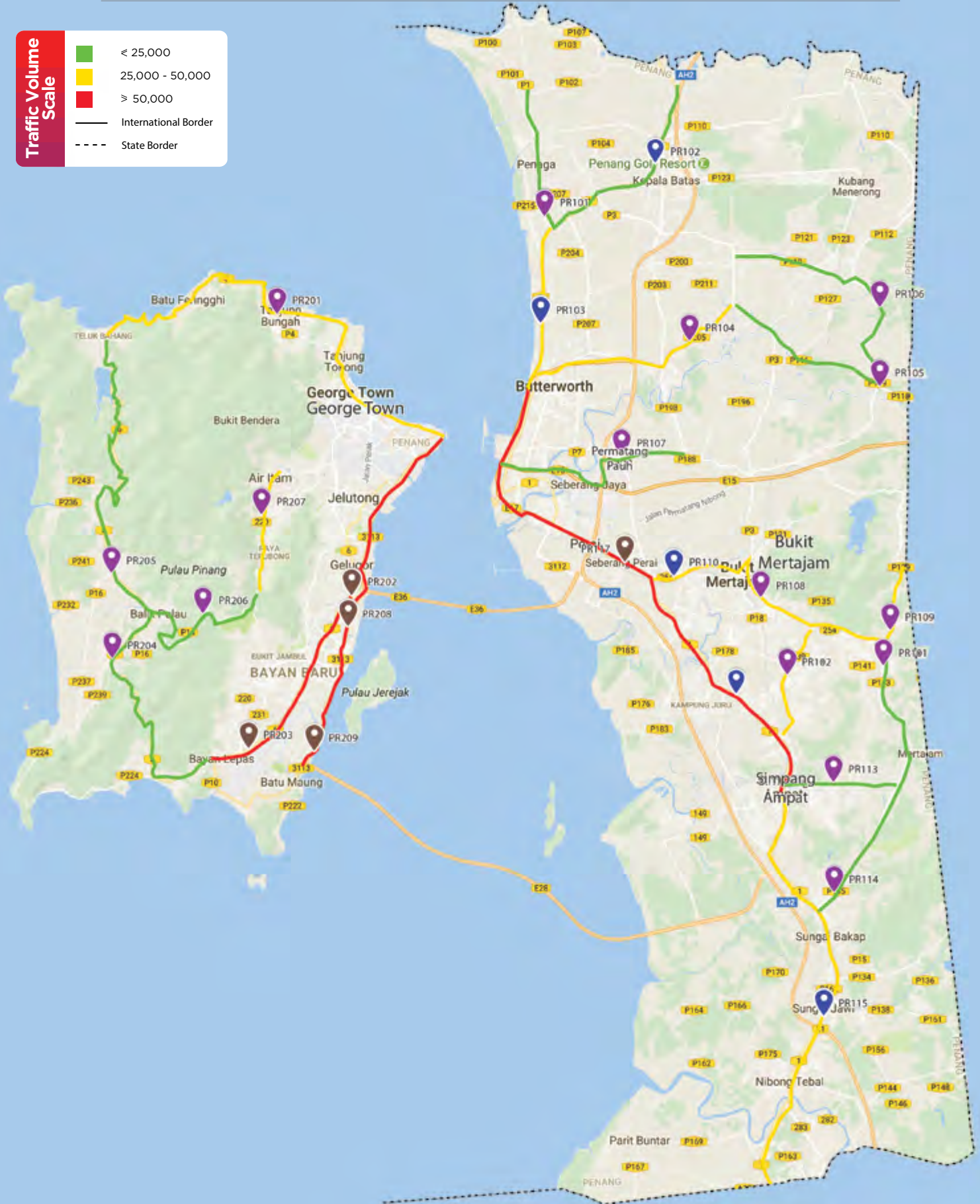
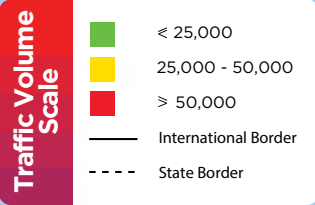


**0.56%
INCREASE**

For the year 2016, the observed traffic growth rate for the state of Pulau Pinang is 1.97%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Pulau Pinang.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Pulau Pinang





PERAK

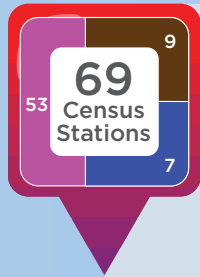
Sultan Azlan Shah Bridge

- Ipoh
- 2004
- 32933.88 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

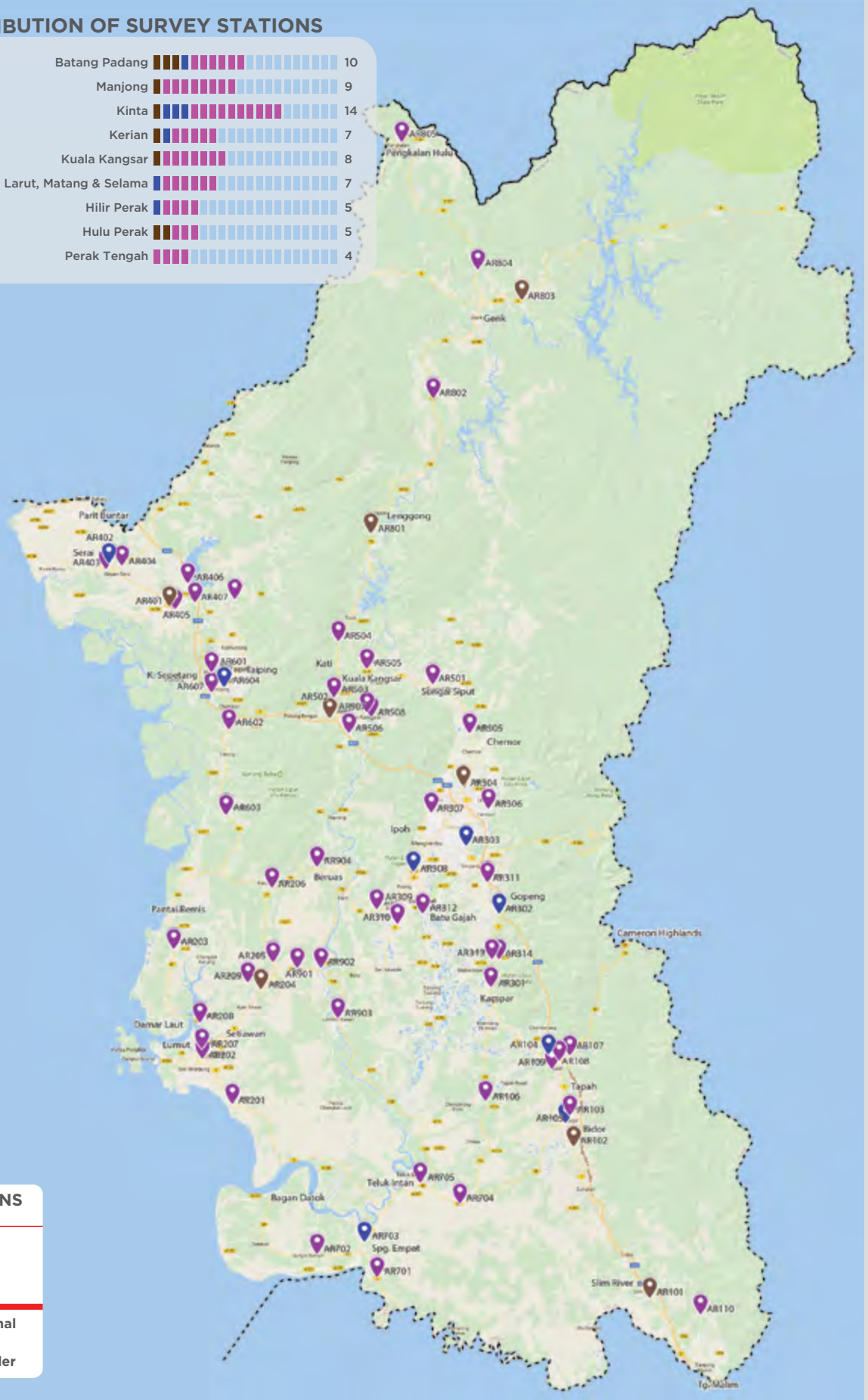
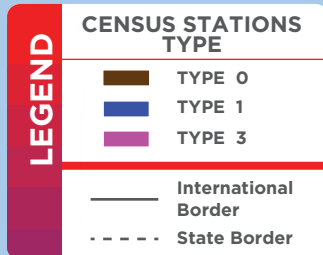
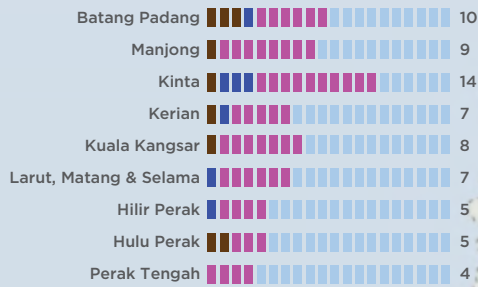
State : Perak

DISTRIBUTION OF SURVEY STATIONS



DISTRICT

NOS. OF CENSUS STATION



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Perak

District : BATANG PADANG

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
AR101	0	1	106.6	Ipoh - Tanjong Malim (Slim River toll house)	3.8205840	101.4149160	K 2-2
AR102	0	1	70.8	Ipoh - Tanjong Malim (south of Bidor)	4.0700930	101.2885130	T 2-2
AR103	3	1	62.8	Ipoh - Tapah-Bidor	4.1210480	101.2804260	K 2-2
AR104	1	1	54.7	Ipoh - Tapah	4.2125000	101.2546530	T 1-1
AR105	0	58	68.4	Ipoh - Bidor - Telok Anson	4.1053700	101.2751380	T 1-1
AR106	3	70	56.4	Ipoh - Kampar - Changkat Jering	4.1424720	101.1454440	T 1-1
AR107	3	59	4.8	Tapah - Cameron Highlands	4.2200560	101.2820830	T 1-1
AR108	3	A119	3.2	Tapah - Chendering	4.2058060	101.2594440	T 1-1
AR109	3	A10	1.6	Tapah - Kampong Changkat Pantai	4.1986390	101.2530560	T 1-1
AR110	3	A121	122.4	Ipoh - Slim River - Behrang Ulu	3.7409540	101.5029030	T 1-1

District : MANJONG

AR201	3	5	103.0	Ipoh/Sitiawan - Kayan	4.1365260	100.7276150	T 1-1
AR202	3	18	95.8	Ipoh - Lumut	4.2110090	100.6797560	K 2-2
AR203	3	60	86.9	Damar Laut - Pantai Remis	4.3944170	100.6305830	T 1-1
AR204	0	5	78.9	Ipoh - Lumut	4.3248110	100.7760690	K 2-2
AR205	3	71	72.5	Ayer Tawar - Beruas	4.3716780	100.7941510	T 1-1
AR206	3	73	55.5	Tanjong Belanja - Beruas	4.4925280	100.7925000	T 1-1
AR207	3	100	5.0	Ipoh - Lumut	4.2272780	100.6766670	T 1-1
AR208	3	60	29.0	Pantai Remis - Kg Baru	4.2736110	100.6732500	T 1-1
AR209	3	A12	3.0	Air Tawar - Pantai Remis	4.3383490	100.7529670	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Perak

District : KINTA

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
AR301	3	1	35.9	Ipoh - Kampar	4.3278330	101.1547500	K 2-2
AR302	1	1	22.5	Ipoh - Kampar	4.4491290	101.1662130	K 2-2
AR303	1	1	5.6	Ipoh - Gopeng	4.5619270	101.1123780	K 2-2
AR304	0	1	8.1	Ipoh - Kuala Kangsar	4.6565660	101.1088160	K 2-2
AR305	3	1	18.7	Ipoh - Kuala Kangsar	4.7463060	101.1176940	K 2-2
AR306	3	A13	9.7	Ipoh - Tanjong Rambutan	4.6218890	101.1487500	K 3-3
AR307	3	A1	3.4	Ipoh - Jelapang	4.6156110	101.0577220	K 3-3
AR308	1	5	9.7	Ipoh - Lumut	4.5168330	101.0270620	T 1-1
AR309	3	73	22.5	Ipoh - Siputeh	4.4569880	100.9658050	T 1-1
AR310	3	5	22.5	Ipoh - Lumut	4.4362780	101.9989720	K 2-2
AR311	3	A8	15.3	Ipoh - Batu Gajah	4.5021110	101.1458330	K 2-2
AR312	3	A15	22.5	Batu Gajah - Tanjong Tualang	4.4500830	101.0415830	T 1-1
AR313	3	A114	1.6	Kuala Dipang - Malim Nawar	4.3774440	101.1552220	T 1-1
AR314	3	A119	32.2	Kuala Dipang - Sahom	4.3739170	101.1655000	T 1-1

District : KERIAN

AR401	0	1	98.2	Ipoh - Butterworth	4.9515260	100.6277310	T 1-1
AR402	1	1	111.1	Ipoh - Butterworth	5.0271700	100.5266180	K 2-2
AR403	3	75	11.0	Bagan Serai - Kuala Kurau	5.0161670	100.5229440	T 1-1
AR404	3	147	31.0	Bagan Serai - Selama	5.0190030	100.5455010	T 1-1
AR405	3	A100	25.0	Semanggol - Kuala Kurau	4.9507220	100.6290280	T 1-1
AR406	3	A111	35.0	Semanggol - Changkat Lobak	4.9935280	100.6532220	T 1-1
AR407	3	A4	21.0	Gunung Semanggol - Taiping	4.9624440	100.6651940	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Perak

District : KUALA KANGSAR

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
AR501	3	1	30.8	Ipoh - Kuala Kangsar	4.7139440	101.1418890	K 2-2
AR502	0	1	56.0	Ipoh - Kuala Kangsar - Changkat Jering (Kg. Kuala Dal)	4.7712290	100.8885300	T 1-1
AR503	3	A76	56.4	Ipoh - Kuala Kangsar - Lenggong (Lunuk Merbau)	4.8080280	100.8956390	T 1-1
AR504	3	A76	68.1	Ipoh - Kuala Kangsar - Grik (Kg. Chuar Hulu)	4.8971940	100.9028060	T 1-1
AR505	3	A11	46.7	Ipoh - Kampong Tamuan - Kati (Kg. Lubuk Chapin)	4.8526390	100.9479720	T 1-1
AR506	3	A3	53.9	Ipoh - Kuala Kangsar - Kenas RPA 4, Jerlun)	4.7461940	100.9202780	T 1-1
AR507	3	A164	5.0	Simpang Sayong - Jambatan Sultan Abdul Jalil	4.7809550	100.9526390	K 2-2
AR508	3	A164	6.0	Simpang Sayong - Tg. Belanja	4.7791450	100.9526500	K 2-2

District : LARUT, MATANG DAN SELAMA

AR601	3	1	82.1	Ipoh - Butterworth	4.8479170	100.6941390	T 1-1
AR602	3	60	79.7	Sitiawan - Taiping	4.7535560	100.7202500	T 1-1
AR603	3	60	96.6	Sitiawan - Taiping	4.6140630	100.7172160	T 1-1
AR604	1	74	83.7	Kuala Sepetang - Taiping	4.8237530	100.7142100	K 2-2
AR605	3	A7	101.4	Taiping - Selama	4.9654550	100.7303230	T 1-1
AR606	3	A5	101.4	Kuala Sepetang - Taiping	4.9652410	4.9652410	T 1-1
AR607	3	74	8.1	Kuala Sepetang - Taiping	4.8137330	100.6947220	T 1-1

District : HILIR PERAK

AR701	3	5	112.7	Ipoh - Telok Intan - Sabak	3.8554722	100.9651944	K 2-2
AR702	3	69	117.5	Ipoh - Simpang Empat - Bagan Datoh	3.8898056	100.8669167	T 1-1
AR703	1	5	106.3	Ipoh - Telok Intan - Simpang Empat	3.9126944	100.9459444	T 1-1
AR704	3	58	78.9	Ipoh - Changkat Jong - Telok Intan	3.9744722	101.1011389	T 1-1
AR705	3	109	-	100m north of Sg. Manik / Kg.Gajah Road junction	4.0085278	101.0381944	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Perak

District : HULU PERAK

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
AR801	0	76	40.0	Kuala Kangsar - Baling	5.0741111	100.9561667	T 1-1
AR802	3	76	133.6	Ipoh - Lenggong - Grik	5.2951111	101.0584444	T 1-1
AR803	0	4	2.4	Lebuhraya Timur - Barat	5.4551111	101.2040000	T 1-1
AR804	3	76	164.2	Ipoh - Grik - Kroh	5.5061111	101.1317500	T 1-1
AR805	3	77	2.0	Pengkalan Hulu - Bentong	5.7170278	101.0053333	T 1-1

District : PERAK TENGAH

AR901	3	5	49.1	Ipoh - Pusing - Bota Kiri - Sitiawan	4.3626667	100.8331667	K 2-2
AR902	3	72	0.9	Tanjong Belanja - Kampong Bota Kiri	4.3626310	100.8748160	T 1-1
AR903	3	109	26.6	Parit - Kg. Gajah	4.2792500	100.9016389	T 1-1
AR904	3	A3	82.9	Ipoh - Kuala Kangsar - Kampong Buloh Akar	4.5296180	100.8661880	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perak

APRIL 2016

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	Busses	Motorcycles	Total
AR101	17,337	15,555	1,519	1700-1800	64.3	8.1	5.4	4.8	0.5	17.0	100.0
AR102	15,854	13,940	1,227	1600-1700	63.3	10.0	8.2	5.8	1.0	11.7	100.0
AR103	-	15,357	1,309	1700-1800	58.8	7.8	9.7	5.4	0.9	17.4	100.0
AR104	-	16,388	1,548	1100-1200	62.4	6.4	6.8	6.9	0.8	16.7	100.0
AR105	7,081	5,934	466	1600-1700	51.0	7.3	3.6	2.2	1.3	34.7	100.0
AR106	-	6,039	541	0700-0800	52.9	12.3	14.4	3.2	1.2	15.9	100.0
AR107	-	9,201	1,347	1400-1500	42.8	10.3	4.6	1.1	0.7	40.4	100.0
AR108	-	1,379	162	1200-1300	48.0	5.0	3.3	0.1	0.4	43.1	100.0
AR109	-	9,570	1,243	0700-0800	59.8	9.4	5.5	1.0	1.0	23.4	100.0
AR110	-	1,905	297	0700-0800	32.3	7.8	5.3	0.6	3.7	50.3	100.0

District : MANJONG

AR201	-	17,895	1,629	0700-0800	52.9	13.6	7.0	8.4	0.9	17.3	100.0
AR202	-	47,369	3,937	1800-1900	63.8	13.0	2.0	0.1	0.5	20.5	100.0
AR203	-	11,306	877	0700-0800	52.5	12.9	10.4	6.7	0.7	16.9	100.0
AR204	28,551	26,152	2,264	1700-1800	60.4	12.2	6.2	4.4	0.8	16.1	100.0
AR205	-	5,244	432	0700-0800	43.4	10.5	8.1	4.6	1.4	32.0	100.0
AR206	-	7,004	676	1700-1800	35.7	10.7	7.4	3.9	0.9	41.3	100.0
AR207	-	18,461	1,639	1700-1800	64.1	11.0	3.6	1.3	0.5	19.5	100.0
AR208	-	13,698	1,289	1700-1800	53.9	12.1	7.0	5.7	0.7	20.6	100.0
AR209	-	7,091	587	0700-0800	53.9	13.7	11.0	3.8	1.2	16.3	100.0

District : KINTA

AR301	-	27,998	2,230	1800-1900	67.4	5.8	8.2	3.5	1.1	13.9	100.0
AR302	-	29,882	2,613	1700-1800	71.8	4.9	6.5	4.4	1.0	11.4	100.0
AR303	-	75,688	6,096	1700-1800	75.4	7.8	3.1	0.5	0.4	12.8	100.0
AR304	92,383	82,977	8,187	1800-1900	63.5	6.6	4.1	2.0	0.6	23.3	100.0
AR305	-	25,098	2,547	1700-1800	47.9	11.8	8.3	5.3	1.1	25.5	100.0
AR306	-	48,954	4,808	1400-1500	62.3	8.0	5.9	0.2	0.2	23.3	100.0
AR307	-	59,474	5,651	1700-1800	81.1	2.0	1.2	0.3	0.4	15.0	100.0
AR308	-	30,839	3,160	0700-0800	73.5	6.9	5.2	1.9	0.3	12.1	100.0
AR309	-	4,862	584	1700-1800	45.4	12.5	10.1	2.2	1.3	28.6	100.0
AR310	-	21,651	2,007	0900-1000	52.6	16.1	9.9	5.6	0.8	15.0	100.0
AR311	-	13,027	1,443	0700-0800	52.8	11.9	8.2	4.5	1.3	21.4	100.0
AR312	-	12,218	1,339	0700-0800	62.9	4.1	7.3	1.4	0.8	23.5	100.0
AR313	-	6,136	611	1300-1400	47.3	7.5	6.0	6.9	1.8	30.3	100.0
AR314	-	929	148	0600-0700	30.6	8.7	10.8	16.3	2.5	31.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perak

APRIL 2016

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	Busses	Motorcycles	Total
AR401	18,036	16,178	1,313	1700-1800	59.2	7.0	8.2	3.8	0.7	21.0	100.0
AR402	-	16,936	1,532	1700-1800	54.1	9.2	9.3	5.3	0.9	21.2	100.0
AR403	-	14,898	1,356	0700-0800	44.6	5.0	5.1	2.4	0.6	42.3	100.0
AR404	-	7,193	726	1700-1800	49.4	7.4	5.9	2.1	0.1	35.0	100.0
AR405	-	6,890	726	0700-0800	45.1	3.6	3.8	0.6	0.5	46.4	100.0
AR406	-	4,367	575	0700-0800	51.6	4.6	6.1	2.0	0.3	35.4	100.0
AR407	-	6,011	607	0700-0800	53.4	4.2	5.5	0.8	0.9	35.2	100.0

District : KUALA KANGSAR

AR501	-	20,572	2,170	0700-0800	54.6	8.1	5.4	4.0	1.1	26.8	100.0
AR502	16,895	15,068	1,359	1700-1800	58.7	7.3	6.3	7.6	0.5	19.6	100.0
AR503	-	13,595	1,197	1700-1800	79.2	5.6	1.7	0.6	0.7	12.2	100.0
AR504	-	7,280	609	0700-0800	71.7	9.2	5.8	3.0	0.5	10.0	100.0
AR505	-	4,658	547	0700-0800	51.8	7.6	5.9	3.6	0.3	30.7	100.0
AR506	-	10,285	1,012	1800-1900	55.4	5.7	4.0	1.9	0.7	32.4	100.0
AR507	-	7,167	822	0700-0800	48.2	5.0	4.2	2.8	0.4	39.3	100.0
AR508	-	9,007	971	0700-0800	49.6	4.6	3.7	1.8	0.3	40.1	100.0

District : LARUT, MATANG DAN SELAMA

AR601	-	21,343	2,167	0700-0800	49.3	8.1	11.5	6.7	1.1	23.4	100.0
AR602	-	3,157	295	1000-1100	36.9	7.4	14.1	8.1	0.4	33.1	100.0
AR603	-	12,367	1,097	0700-0800	48.6	9.5	13.1	7.8	0.7	20.2	100.0
AR604	-	40,065	3,293	1700-1800	60.4	6.5	3.9	1.3	0.7	27.2	100.0
AR605	-	3,606	416	0700-0800	48.7	10.0	9.2	1.2	0.4	30.5	100.0
AR606	-	10,639	1,251	0700-0800	50.8	6.9	5.1	0.4	0.5	36.2	100.0
AR607	-	14,684	1,422	0700-0800	50.9	8.5	8.7	1.3	0.7	29.9	100.0

District : HILIR PERAK

AR701	-	27,474	2,391	1800-1900	68.2	12.5	2.8	1.2	0.6	14.7	100.0
AR702	-	10,810	1,153	0700-0800	54.3	8.9	7.8	1.8	0.7	26.5	100.0
AR703	27,861	27,861	2,252	1700-1800	57.4	12.0	7.5	4.2	0.7	18.2	100.0
AR704	-	10,458	917	1500-1600	55.7	15.7	7.9	4.8	2.0	13.8	100.0
AR705	-	6,085	605	1700-1800	58.8	13.3	6.5	3.3	0.1	17.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perak

APRIL 2016

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	Busses	Motorcycles	Total
AR801	6,804	6,033	529	1800-1900	65.4	16.5	7.2	2.7	0.8	7.4	100.0
AR802	-	5,042	597	0700-0800	47.6	14.4	6.0	5.5	0.9	25.5	100.0
AR803	4,537	3,723	324	1700-1800	59.8	13.6	8.1	6.6	1.3	10.6	100.0
AR804	-	6,027	573	0700-0800	46.3	11.3	3.2	2.7	0.6	36.0	100.0
AR805	-	6,421	633	1500-1600	39.0	11.8	4.6	2.1	0.0	42.5	100.0

District : PERAK TENGAH

AR901	-	22,285	2,041	1700-1800	60.5	10.5	8.7	4.5	0.7	15.0	100.0
AR902	-	4,026	482	0700-0800	46.9	7.8	10.7	1.7	0.2	32.6	100.0
AR903	-	6,323	636	0700-0800	52.6	10.2	7.8	2.6	0.2	26.7	100.0
AR904	-	1,894	177	1300-1400	46.0	10.0	8.9	5.9	1.1	28.1	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perak

OCTOBER 2016

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	Busses	Motorcycles	Total
AR101	16,395	14,819	1,263	1700-1800	65.7	7.1	5.2	5.6	0.6	15.8	100.0
AR102	17,166	15,121	1,263	1700-1800	65.7	7.1	5.2	5.6	0.6	15.8	100.0
AR103	-	13,462	1,405	1400-1500	57.5	6.3	9.7	4.7	0.7	21.1	100.0
AR104	-	13,658	1,035	1800-1900	61.7	7.7	6.8	6.8	0.9	16.1	100.0
AR105	8,103	7,365	535	1700-1800	49.7	8.0	6.5	2.6	0.8	32.4	100.0
AR106	-	6,725	583	1700-1800	56.9	8.6	13.8	4.2	0.9	15.7	100.0
AR107	-	8,522	792	0700-0800	57.7	7.0	4.6	1.6	0.8	28.3	100.0
AR108	-	1,073	172	0700-0800	33.6	6.0	4.7	0.7	0.5	54.5	100.0
AR109	-	9,373	872	0700-0800	68.1	6.6	4.9	1.1	0.7	18.7	100.0
AR110	-	1,873	224	0700-0800	36.7	10.6	6.2	0.5	0.3	45.6	100.0

District : MANJONG

AR201	-	16,945	1,618	0700-0800	55.4	11.5	7.3	6.7	0.9	18.2	100.0
AR202	-	44,641	3,886	1800-1900	66.4	11.0	2.4	0.3	0.5	19.5	100.0
AR203	-	10,936	845	1800-1900	52.8	14.3	10.7	6.5	0.7	15.0	100.0
AR204	27,931	25,726	2,218	1700-1800	61.8	11.2	6.2	5.1	0.8	14.9	100.0
AR205	-	4,488	488	1800-1900	49.9	9.0	7.7	3.9	1.0	28.5	100.0
AR206	-	5,489	574	0700-0800	37.3	7.8	5.8	2.9	0.6	45.6	100.0
AR207	-	18,435	1,830	0700-0800	63.5	12.2	4.1	1.4	0.5	18.2	100.0
AR208	-	14,592	1,331	1700-1800	52.5	12.4	9.9	8.4	0.7	16.2	100.0
AR209	-	6,673	754	0800-0900	54.7	14.7	11.9	3.4	1.2	14.0	100.0

District : KINTA

AR301	-	21,310	2,107	0700-0800	66.6	7.1	8.5	3.3	1.2	13.4	100.0
AR302	-	26,597	3,160	1800-1900	68.0	7.7	6.8	5.0	0.8	11.7	100.0
AR303	-	79,278	5,889	1800-1900	72.1	10.7	3.4	0.5	0.5	12.8	100.0
AR304	87,371	79,826	7,267	1700-1800	65.1	6.4	3.9	2.3	0.6	21.7	100.0
AR305	-	20,090	2,341	1700-1800	49.6	11.8	9.4	5.3	1.3	22.6	100.0
AR306	-	33,809	3,844	0700-0800	62.0	6.7	3.0	0.4	0.6	27.3	100.0
AR307	-	35,722	2,900	0900-1000	63.5	6.3	4.2	0.9	0.5	24.7	100.0
AR308	-	28,125	2,916	0700-0800	72.7	7.6	5.7	1.9	0.4	11.7	100.0
AR309	-	4,840	591	0700-0800	51.8	7.5	5.9	1.6	1.0	32.2	100.0
AR310	-	21,414	2,059	1700-1800	55.4	13.4	6.7	3.4	0.9	20.1	100.0
AR311	-	14,065	1,366	0700-0800	47.4	16.2	10.4	4.7	1.7	19.7	100.0
AR312	-	12,707	1,065	1200-1300	59.8	5.1	8.5	2.4	0.8	23.4	100.0
AR313	-	6,859	585	1000-1100	50.2	6.2	4.7	4.6	1.0	33.3	100.0
AR314	-	862	189	0600-0700	27.7	9.9	10.7	14.2	2.6	35.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perak

OCTOBER 2016

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	Busses	Motorcycles	Total
AR401	18,160	18,160	1,462	1800-1900	58.2	11.1	8.3	3.5	0.7	18.2	100.0
AR402	-	15,421	1,395	1700-1800	58.9	8.0	8.1	4.1	0.9	19.9	100.0
AR403	-	14,034	1,346	0700-0800	49.2	5.4	3.4	0.6	0.5	40.8	100.0
AR404	-	7,003	664	0700-0800	51.1	8.3	5.2	1.0	0.1	34.3	100.0
AR405	-	6,767	897	0700-0800	41.1	4.1	3.6	0.8	0.6	49.7	100.0
AR406	-	4,020	456	0700-0800	49.3	6.6	9.5	1.2	0.4	33.1	100.0
AR407	-	5,705	589	0700-0800	53.8	4.3	5.3	0.7	1.0	34.9	100.0

District : KUALA KANGSAR

AR501	-	19,299	2,165	0700-0800	56.4	9.0	6.1	4.1	1.2	23.1	100.0
AR502	15,540	13,849	1,277	1700-1800	58.9	7.9	6.6	7.1	0.5	19.0	100.0
AR503	-	19,299	721	1700-1800	63.3	6.6	2.0	1.2	8.2	18.7	100.0
AR504	-	6,874	638	0700-0800	67.5	9.8	7.8	3.5	0.8	10.5	100.0
AR505	-	4,458	527	0700-0800	52.1	7.3	7.1	3.3	0.3	29.9	100.0
AR506	-	10,894	975	1800-1900	54.6	4.9	4.7	1.8	0.8	33.2	100.0
AR507	-	10,894	975	1800-1900	54.6	4.9	4.7	1.8	0.8	33.2	100.0
AR508	-	9,689	1,066	0700-0800	48.5	3.9	3.9	1.8	0.2	41.6	100.0

District : LARUT, MATANG DAN SELAMA

AR601	-	21,310	2,531	0700-0800	52.3	7.9	10.7	6.0	1.0	22.1	100.0
AR602	-	3,236	302	0700-0800	37.9	7.4	12.5	9.0	0.9	32.4	100.0
AR603	-	15,471	1,568	1700-1800	52.3	8.8	10.5	6.6	0.6	21.2	100.0
AR604	-	37,397	2,531	1700-1800	64.0	6.1	3.5	1.2	0.8	24.4	100.0
AR605	-	3,083	290	0700-0800	49.9	10.8	6.4	2.8	0.7	29.4	100.0
AR606	-	11,260	1,306	0700-0800	50.8	7.5	5.6	0.8	0.6	34.6	100.0
AR607	-	18,635	1,858	1400-1500	50.5	10.0	7.3	1.8	0.5	29.9	100.0

District : HILIR PERAK

AR701	-	10,718	858	1500-1600	44.6	18.4	13.1	13.9	0.6	9.3	100.0
AR702	-	9,658	945	1700-1800	55.6	9.2	6.6	2.0	0.4	26.1	100.0
AR703	-	38,186	14,602	0700-0800	38.8	6.6	5.9	2.7	0.4	45.6	100.0
AR704	-	10,262	885	1700-1800	55.7	13.5	8.8	6.6	2.2	13.2	100.0
AR705	-	6,138	589	1700-1800	55.1	10.5	9.1	11.3	0.0	13.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Perak

OCTOBER 2016

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	Busses	Motorcycles	Total
AR801	6,847	6,048	534	1800-1900	65.4	16.4	7.2	2.7	0.8	7.5	100.0
AR802	-	6,415	615	1700-1800	46.6	13.6	8.5	3.3	1.0	27.0	100.0
AR803	4,740	3,912	343	1500-1600	61.1	13.5	7.6	6.1	1.6	10.1	100.0
AR804	-	6,059	718	0700-0800	46.1	11.8	4.5	2.3	0.8	34.4	100.0
AR805	-	4,544	401	0700-0800	38.5	10.4	3.2	0.9	0.1	46.8	100.0

District : PERAK TENGAH

AR901	-	29,290	2,867	0700-0800	53.6	17.8	8.8	3.9	0.9	15.0	100.0
AR902	-	4,346	440	0700-0800	44.3	10.4	11.7	2.0	0.2	31.4	100.0
AR903	-	6,800	870	0600-0700	49.8	11.4	5.6	2.9	0.1	30.1	100.0
AR904	-	1,363	119	1800-1900	45.9	11.5	10.1	5.0	0.9	26.7	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Perak

AVERAGE 2016

District : BATANG PADANG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
AR101	15,187	1,391	65.0	7.6	5.3	5.2	0.5	16.4	100%	A	2107
AR102	14,530	1,245	64.5	8.6	6.7	5.7	0.8	13.8	100%	D	2034
AR103	14,410	1,357	58.2	7.0	9.7	5.0	0.8	19.2	100%	A	-
AR104	15,023	1,291	62.0	7.1	6.8	6.8	0.8	16.4	100%	D	-
AR105	6,650	501	50.3	7.6	5.0	2.4	1.0	33.6	100%	A	-
AR106	6,382	562	54.9	10.5	14.1	3.7	1.0	15.8	100%	A	-
AR107	8,862	1,070	50.2	8.7	4.6	1.4	0.7	34.4	100%	A	2030
AR108	1,226	167	40.8	5.5	4.0	0.4	0.5	48.8	100%	A	-
AR109	9,472	1,058	64.0	8.0	5.2	1.0	0.8	21.0	100%	A	2030
AR110	1,889	585	34.5	9.2	5.7	0.6	2.0	47.9	100%	A	2035

District : MANJONG

AR201	17,420	1,624	54.1	12.6	7.1	7.5	0.9	17.7	100%	F	R
AR202	46,005	3,912	65.1	12.0	2.2	0.2	0.5	20.0	100%	C	2046
AR203	11,121	861	52.7	13.6	10.6	6.6	0.7	15.9	100%	A	2062
AR204	25,939	2,241	61.1	11.7	6.2	4.7	0.8	15.5	100%	A	2047
AR205	4,866	460	46.7	9.8	7.9	4.2	1.2	30.2	100%	A	2089
AR206	6,247	625	36.5	9.2	6.6	3.4	0.8	43.5	100%	A	2041
AR207	18,448	1,735	63.8	11.6	3.9	1.3	0.5	18.9	100%	E	2018
AR208	14,145	1,310	53.2	12.2	8.4	7.0	0.7	18.4	100%	D	2019
AR209	6,882	671	54.3	14.2	11.5	3.6	1.2	15.2	100%	A	2057

District : KINTA

AR301	24,654	2,169	67.0	6.5	8.3	3.4	1.1	13.7	100%	A	2071
AR302	28,239	2,887	69.9	6.3	6.6	4.7	0.9	11.5	100%	A	2050
AR303	77,483	5,992	73.7	9.3	3.2	0.5	0.5	12.8	100%	E	2024
AR304	81,402	7,727	64.3	6.5	4.0	2.1	0.6	22.5	100%	F	R
AR305	22,594	2,444	48.8	11.8	8.9	5.3	1.2	24.1	100%	A	-
AR306	41,382	4,326	62.2	7.3	4.5	0.3	0.4	25.3	100%	A	2085
AR307	47,598	4,276	72.3	4.1	2.7	0.6	0.4	19.8	100%	A	2025
AR308	29,482	3,038	73.1	7.3	5.4	1.9	0.4	11.9	100%	F	R
AR309	4,851	588	48.6	10.0	8.0	1.9	1.1	30.4	100%	A	-
AR310	21,533	2,033	54.0	14.7	8.3	4.5	0.9	17.6	100%	A	2080
AR311	13,546	1,405	50.1	14.0	9.3	4.6	1.5	20.5	100%	A	2035
AR312	12,463	1,202	61.4	4.6	7.9	1.9	0.8	23.5	100%	A	2040
AR313	6,498	598	48.8	6.9	5.4	5.8	1.4	31.8	100%	A	-
AR314	896	169	29.1	9.3	10.7	15.2	2.5	33.1	100%	A	2081

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Perak

AVERAGE 2016

District : KERIAN

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
AR401	17,169	1,387	58.7	9.0	8.3	3.6	0.7	19.6	100%	D	2024
AR402	16,178	1,463	56.5	8.6	8.7	4.7	0.9	20.5	100%	A	2121
AR403	14,466	1,351	46.9	5.2	4.2	1.5	0.6	41.6	100%	C	2052
AR404	7,098	695	50.3	7.8	5.6	1.6	0.1	34.6	100%	A	2116
AR405	6,829	812	43.1	3.9	3.7	0.7	0.5	48.0	100%	A	2038
AR406	4,194	516	50.4	5.6	7.8	1.6	0.3	34.2	100%	A	2134
AR407	5,858	598	53.6	4.3	5.4	0.8	1.0	35.0	100%	A	2128

District : KUALA KANGSAR

AR501	19,936	2,168	55.5	8.6	5.8	4.1	1.2	25.0	100%	A	2086
AR502	14,459	1,318	58.8	7.6	6.4	7.4	0.5	19.3	100%	D	2035
AR503	16,447	959	71.2	6.1	1.9	0.9	4.5	15.4	100%	A	2033
AR504	7,077	624	69.6	9.5	6.8	3.3	0.6	10.2	100%	A	2106
AR505	4,558	537	51.9	7.5	6.5	3.5	0.3	30.3	100%	A	2062
AR506	10,590	994	55.0	5.3	4.4	1.8	0.7	32.8	100%	A	2034
AR507	9,031	899	51.4	4.9	4.5	2.3	0.6	36.3	100%	A	2050
AR508	9,348	1,019	49.1	4.2	3.8	1.8	0.3	40.9	100%	A	2055

District : LARUT, MATANG DAN SELAMA

AR601	21,327	2,349	50.8	8.0	11.1	6.3	1.0	22.7	100%	F	R
AR602	3,197	299	37.4	7.4	13.3	8.5	0.7	32.7	100%	A	-
AR603	13,919	1,333	50.5	9.2	11.8	7.2	0.6	20.7	100%	E	2019
AR604	38,731	2,912	62.2	6.3	3.7	1.3	0.7	25.8	100%	A	-
AR605	3,345	353	49.3	10.4	7.8	2.0	0.6	29.9	100%	A	2175
AR606	10,950	1,279	50.8	7.2	5.4	0.6	0.5	35.4	100%	B	2028
AR607	16,660	1,640	50.7	9.3	8.0	1.5	0.6	29.9	100%	E	2018

District : HILIR PERAK

AR701	19,096	1,625	56.4	15.5	8.0	7.5	0.6	12.0	100%	A	2046
AR702	10,234	1,049	55.0	9.1	7.2	1.9	0.5	26.3	100%	A	2045
AR703	33,024	8,427	48.1	9.3	6.7	3.5	0.6	31.9	100%	F	R
AR704	10,360	901	55.7	14.6	8.4	5.7	2.1	13.5	100%	B	2052
AR705	6,112	597	57.0	11.9	7.8	7.3	0.1	15.9	100%	A	2089

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Perak

AVERAGE 2016

District : HULU PERAK

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
AR801	3,139	514	63.2	16.5	8.2	4.1	1.0	7.0	100%	A	-
AR802	6,476	587	46.2	11.9	8.3	3.8	0.9	29.0	100%	A	-
AR803	3,293	284	57.0	15.1	7.2	9.4	1.5	9.8	100%	A	2067
AR804	6,492	750	46.3	9.1	4.1	1.5	0.6	38.4	100%	A	-
AR805	7,615	814	43.2	10.3	2.6	1.0	0.3	42.7	100%	A	2065

District : PERAK TENGAH

AR901	3,017	531	65.4	16.5	7.2	2.7	0.8	7.4	100%	A	-
AR902	5,729	606	47.1	14.0	7.3	4.4	0.9	26.3	100%	A	-
AR903	3,818	334	60.4	13.6	7.8	6.3	1.5	10.3	100%	A	2068
AR904	6,043	646	46.2	11.5	3.8	2.5	0.7	35.2	100%	A	-

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Perak

District : BATANG PADANG

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
AR101	15,028	13,854	15,038	15,323	14,039	14,431	15,328	16,501	16,736	15,187	1.3	0.40
AR102	12,244	12,041	11,503	14,454	13,191	14,225	13,812	11,147	11,109	14,530	0.5	0.02
AR103	14,265	15,054	14,632	14,966	15,057	14,994	15,341	14,832	14,400	14,410	-0.1	0.00
AR104	14,745	14,984	15,618	14,944	15,991	15,253	15,199	15,320	14,427	15,023	-0.1	0.01
AR105	9,391	8,970	8,057	8,923	7,368	7,099	6,687	6,232	6,898	6,650	-4.3	0.81
AR106	6,659	7,084	7,852	7,427	7,841	7,565	7,310	7,240	7,804	6,382	-0.1	0.00
AR107	6,054	6,260	5,853	6,244	6,473	7,153	7,796	7,024	8,107	8,862	4.2	0.84
AR108	2,046	2,294	2,410	2,168	2,080	2,343	2,302	2,493	3,717	1,226	-0.5	0.00
AR109	7,054	7,071	7,582	7,297	7,644	8,292	7,978	9,150	10,594	9,472	4.1	0.83
AR110	1,298	1,060	957	1,203	1,054	1,131	1,278	1,543	1,845	1,889	6.0	0.60

District : MANJONG

AR201	12,509	13,375	13,935	14,342	14,331	14,975	15,077	15,254	16,457	17,420	3.1	0.94
AR202	42,117	44,049	46,594	43,896	47,749	48,757	46,346	46,749	46,926	46,005	0.9	0.36
AR203	9,717	10,162	10,693	10,767	11,160	10,273	11,052	10,788	11,942	11,121	1.4	0.58
AR204	20,778	21,138	23,920	22,389	23,758	25,283	25,942	23,834	26,494	25,939	2.5	0.76
AR205	4,535	4,730	4,890	5,171	5,412	5,678	5,812	5,301	5,838	4,866	1.8	0.36
AR206	3,837	6,161	6,656	6,552	6,915	6,967	6,786	6,823	7,554	6,247	3.7	0.35
AR207	11,918	12,776	13,958	14,620	15,866	15,647	17,179	17,027	18,977	18,448	5.0	0.95
AR208	7,659	10,549	11,400	11,780	11,663	12,445	13,049	12,921	14,811	14,145	5.4	0.78
AR209	5,478	5,193	6,373	6,254	6,227	6,214	6,765	6,201	6,577	6,882	2.3	0.63

District : KINTA

AR301	23,262	23,050	23,659	31,022	30,311	27,497	28,520	27,126	30,592	24,654	1.7	0.20
AR302	23,244	23,180	23,341	23,518	19,485	25,951	25,176	24,263	26,103	28,239	2.0	0.37
AR303	64,866	71,205	79,513	84,135	73,487	85,819	77,195	78,210	78,136	77,483	1.3	0.22
AR304	41,708	60,968	71,845	80,595	70,470	82,923	73,024	64,750	76,894	81,402	4.2	0.39
AR305	25,811	25,699	25,075	26,251	29,168	39,267	29,117	25,116	25,904	22,594	-0.3	0.00
AR306	36,416	42,284	38,475	41,786	38,155	38,194	48,879	41,249	42,366	41,382	1.2	0.19
AR307	25,367	29,434	23,614	34,204	46,163	51,996	49,227	60,125	62,591	47,598	10.2	0.76
AR308	24,007	20,742	23,084	24,336	22,253	27,970	28,020	25,433	29,775	29,482	3.3	0.66
AR309	6,801	7,109	5,804	6,207	7,280	6,303	6,209	5,734	5,303	4,851	-3.2	0.58
AR310	17,680	17,239	18,561	15,378	19,306	15,522	14,681	19,823	18,624	21,533	1.4	0.12
AR311	6,299	7,208	6,643	8,087	8,286	8,638	10,312	8,614	10,475	13,546	7.0	0.85
AR312	9,174	11,683	11,899	11,750	11,956	13,356	13,361	12,964	11,647	12,463	2.2	0.39
AR313	7,801	8,670	9,230	8,350	9,994	12,777	14,818	7,422	7,013	6,498	-1.4	0.03
AR314	2,100	1,748	2,266	1,951	2,124	2,260	1,956	3,249	1,933	896	3.1	0.08

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Perak

District : KERIAN

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
AR401	13,830	14,112	14,743	14,777	15,143	16,130	16,268	15,728	16,248	17,169	2.2	0.91
AR402	17,675	18,207	17,491	17,972	16,679	21,074	21,116	21,245	17,641	16,178	0.4	0.02
AR403	12,818	12,325	12,685	12,287	11,724	11,629	11,235	10,735	15,748	14,466	1.0	0.07
AR404	6,986	6,488	6,414	7,315	6,760	6,583	7,028	6,692	7,089	7,098	0.5	0.12
AR405	4,785	5,353	5,520	5,932	5,746	5,550	6,522	6,552	7,198	6,829	3.9	0.86
AR406	3,735	3,843	4,166	4,698	4,433	4,246	4,084	4,347	4,295	4,194	1.0	0.19
AR407	5,355	5,447	5,852	5,670	5,660	6,312	5,501	5,679	6,159	5,858	0.9	0.29

District : KUALA KANGSAR

AR501	17,142	18,036	19,085	19,426	22,500	19,251	20,478	18,578	19,895	19,936	1.2	0.23
AR502	12,048	11,687	14,348	13,309	12,599	12,008	11,485	11,729	14,071	14,459	0.9	0.09
AR503	9,789	8,135	10,312	8,739	8,966	8,847	8,352	9,061	12,262	16,447	4.1	0.33
AR504	6,045	5,886	7,103	6,891	6,420	6,625	7,927	6,470	6,267	7,077	1.1	0.15
AR505	3,814	3,588	3,357	4,335	4,132	4,121	4,202	4,377	4,435	4,558	2.6	0.64
AR506	7,335	7,824	8,463	8,406	8,536	8,647	10,216	10,052	9,432	10,590	3.7	0.86
AR507	4,671	5,135	6,791	5,809	6,537	6,376	6,670	6,662	7,633	9,031	5.5	0.78
AR508	5,746	7,164	7,512	6,741	7,044	8,183	7,595	7,463	7,696	9,348	4.5	0.89

District : LARUT, MATANG DAN SELAMA

AR601	11,989	16,091	16,752	14,128	3,379	19,410	20,588	19,881	20,664	21,327	3.6	0.30
AR602	2,887	2,705	7,163	11,385	11,831	3,181	3,412	3,365	3,034	3,197	-4.2	0.05
AR603	15,574	10,034	7,076	10,270	18,646	12,586	12,938	12,531	12,949	13,919	2.4	0.07
AR604	46,533	44,168	45,713	36,198	37,714	39,945	30,367	36,469	39,156	38,731	-2.5	0.35
AR605	3,068	3,431	3,293	3,947	3,594	3,299	3,778	3,514	3,198	3,345	0.2	0.01
AR606	8,110	8,071	8,832	8,784	9,351	9,627	10,209	10,144	10,212	10,950	3.4	0.95
AR607	10,554	10,931	11,066	13,415	12,599	13,254	13,071	14,503	14,420	16,660	3.6	0.83

District : HILIR PERAK

AR701	11,291	10,206	9,643	10,286	10,192	10,047	10,554	10,962	10,885	19,096	3.6	0.30
AR702	9,502	8,612	9,482	9,629	10,132	10,241	10,872	10,581	10,433	10,234	1.8	0.62
AR703	14,351	24,244	25,159	25,365	25,004	28,465	25,489	25,865	27,249	33,024	5.2	0.54
AR704	8,793	8,806	9,504	9,758	10,135	11,064	9,249	9,776	9,784	10,360	1.4	0.35
AR705	5,613	5,033	5,588	5,668	5,655	6,216	5,516	5,704	6,039	6,112	1.3	0.43

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Perak

District : HULU PERAK

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
AR801	5,319	2,509	2,715	1,724	3,110	3,562	3,487	2,826	3,139	3,017	-0.7	0.00
AR802	9,260	7,498	8,006	10,831	6,760	6,930	7,627	6,975	6,476	5,729	-4.3	0.50
AR803	2,846	2,946	3,078	3,337	3,148	3,944	3,796	3,636	3,293	3,818	3.0	0.60
AR804	6,982	5,953	5,638	8,234	5,586	5,869	6,306	7,114	6,492	6,043	-0.2	0.00
AR805	6,192	6,555	7,812	5,477	6,167	6,552	6,862	6,253	7,615	5,483	-0.3	0.00

District : PERAK TENGAH

AR901	14,182	15,405	13,191	14,543	16,257	21,547	21,573	21,064	19,953	25,788	6.7	0.79
AR902	1,991	3,110	3,129	3,426	3,648	4,300	4,599	4,280	4,997	4,186	7.7	0.75
AR903	3,176	4,249	4,189	4,575	4,813	5,831	4,891	5,641	5,096	6,562	5.9	0.76
AR904	1,238	1,454	1,321	1,363	1,567	1,637	1,918	1,606	1,520	1,629	2.9	0.49

STATISTIC FOR YEAR 2016

State : Perak

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

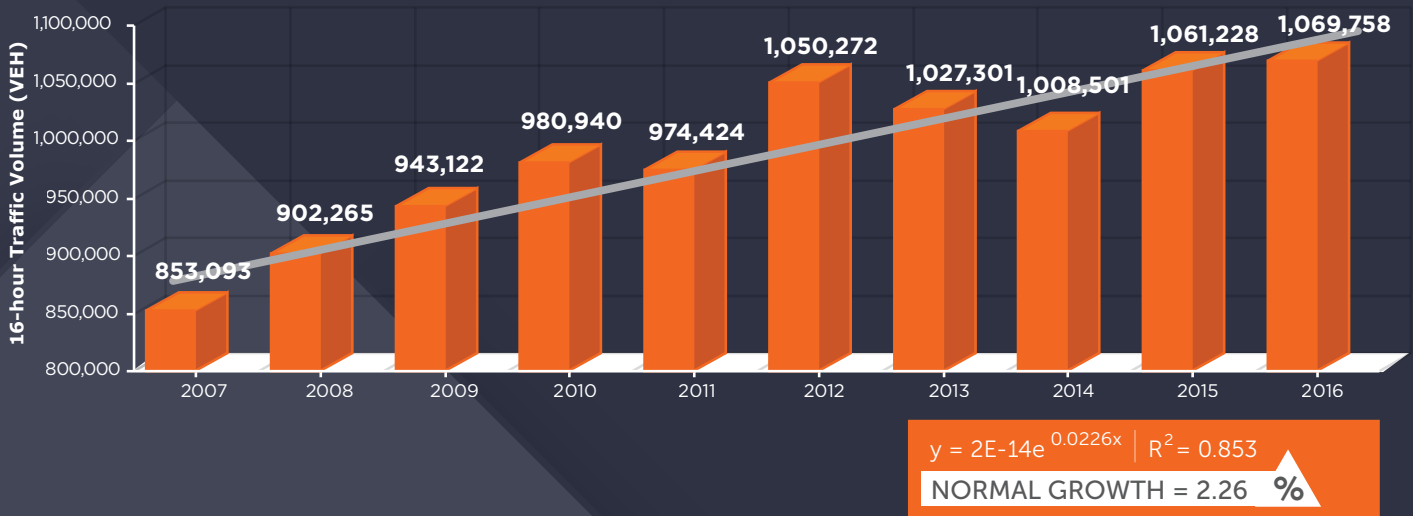




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Perak



PERAK

There are 69 census stations in Perak. From the yearly 16-hour traffic volume, there is a slight decline for the number of vehicles for the years 2011, 2013 and 2014. The number of vehicles increased by 0.80% from the year 2015 to 2016 which is equivalent to 8,530 vehicles.

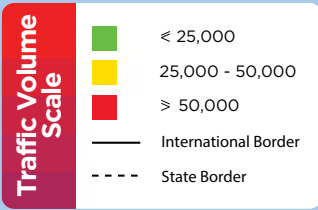


0.80% INCREASE

For the year 2016, the observed traffic growth rate for the state of Perak is 2.26%. The basis of traffic growth rate record is to be used as projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Perak.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Perak





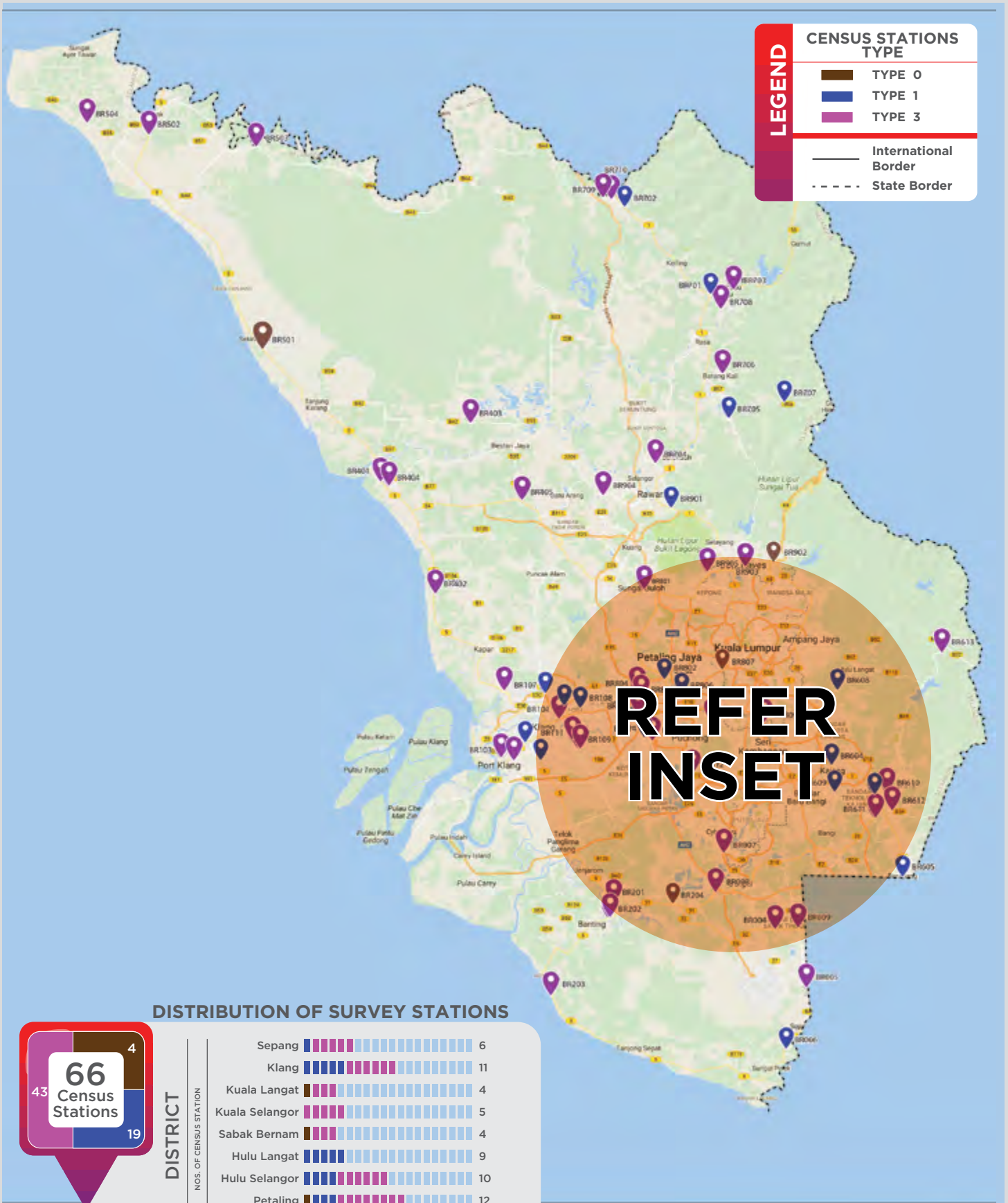
SELANGOR

Sprint Mont Kiara

Road Length: 22399.43 KM
Source: Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

State : Selangor



LEGEND

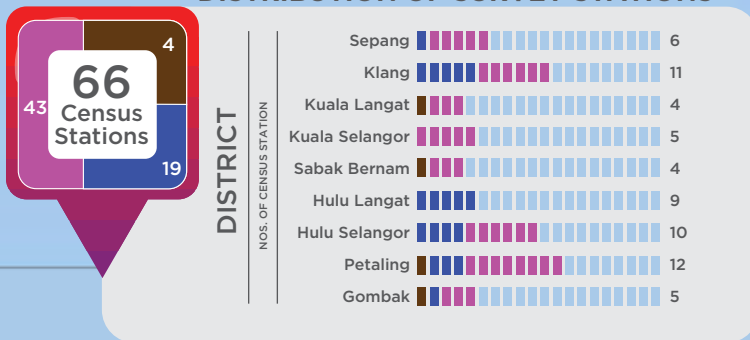
CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



DISTRIBUTION OF SURVEY STATIONS



TRAFFIC CENSUS STATION MAP

State : Selangor

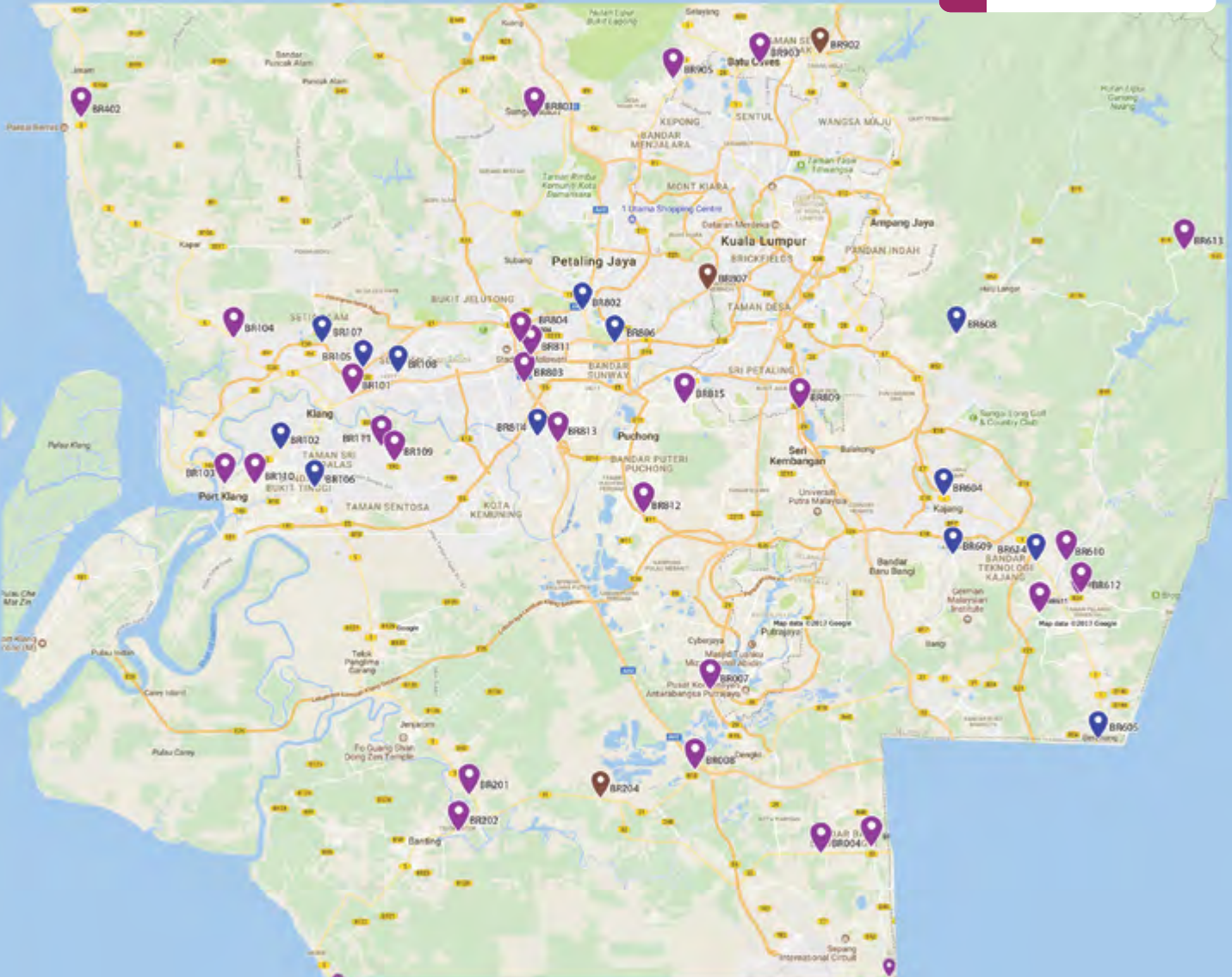
LEGEND

CENSUS STATIONS TYPE

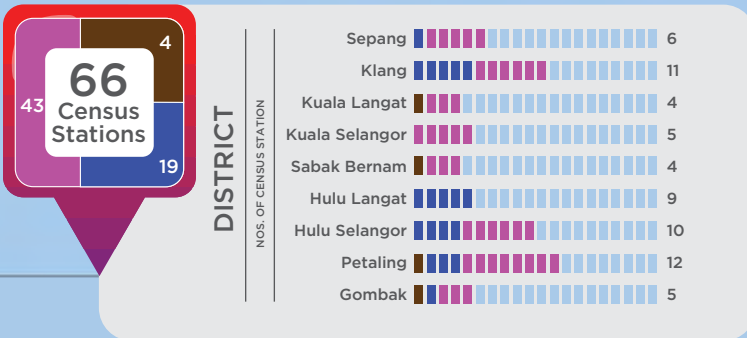
- TYPE 0
- TYPE 1
- TYPE 3

International Border

State Border



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Selangor

District : SEPANG

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
BR004	3	32	15.0	Salak Tinggi - Bukit Changgang - Banting (IKTBN Sepang)	2.8058889	101.7185000	K 2-2
BR005	3	B48	6.0	Kuala Lumpur - Salak - Sepang (Labu Johnson)	2.7380000	101.7554167	T 1-1
BR006	1	5	50.0	Klang - Sepang (Batu Dua)	2.6642778	101.7313889	T 1-1
BR007	3	29	1.0	KLIA - Putrajaya (PICC)	2.8946389	101.6580000	K 2-2
BR008	3	31	2.0	Jln Dengkil - Banting (Plantation)	2.8507500	101.6503611	T 1-1
BR009	3	B48	0.0	Jalan Sepang - Kajang (Taman Rekreasi Pejabat Daerah Sepang)	2.8095556	101.7463333	T 1-1

District : KLANG

BR101	3	2	12.0	Kuala Lumpur - Klang	3.0571667	101.4710000	K 3-3
BR102	1	2	6.0	Klang - Port Klang (Persiaran Raja Muda Musa)	3.0257778	101.4233056	K 3-3
BR103	3	2	6.0	Jalan Pelabuhan - near Northport	3.0071111	101.3939722	T 1-1
BR104	3	5	444.0	Klang - Kuala Selangor	3.0866667	101.3980278	K 3-3
BR105	1	5	438.0	Klang - Kuala Selangor	3.0611940	101.4732220	K 2-2
BR106	1	5	429.0	Klang - Telok Datok	3.0045278	101.4419444	K 2-2
BR107	1	3217	10.0	Klang - Meru	3.0832222	101.4463889	K 2-2
BR108	1	20	0.3	300m fr junction Federal Highway - North Klang Straits Bypass	3.0615000	101.4734444	K 3-3
BR109	3	190	10.0	Kuala Lumpur - Kg. Batu Enam - Klang Jalan Kebun	3.0228611	101.4816944	T 1-1
BR110	3	3218	3.5	Langat Road - Pandamaran (Pandamaran Road)	3.0056944	101.4099167	T 1-1
BR111	3	190	4.8	K. Lumpur - Puchong - Kg. Batu Enam (Jln Bukit Kemuning)	3.0243889	101.4807500	T 1-1

District : KUALA LANGAT

BR201	3	5	406.0	Klang - Telok Datok	2.8377500	101.5265000	K 2-2
BR202	3	5	402.0	Klang - Telok Datok-Banting	2.8188611	101.5213611	K 2-2
BR203	3	5	379.0	Klang - Morib-Batu Laut	2.7295833	101.4553611	T 1-1
BR204	0	31	-	Kelang - Telok Datok - Morib - Sepang	2.8353611	101.5978056	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Selangor

District : KUALA SELANGOR

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)	Type of Carriageway
BR401	3	5	480.0	Klang - Kuala Selangor	3.3361940 101.2515000	K 2-2
BR402	3	5	463.0	Klang - Kuala Selangor	3.2053610 101.3150830	K 2-2
BR403	3	B42	14.0	Pasir Penambang - Batang Berjuntai (Jalan Raja Musa)	3.4050833 101.3582222	T 1-1
BR404	3	B33	1.0	Kuala Lumpur - Rawang-Kuala Selangor	3.3279722 101.2616944	T 1-1
BR405	3	54	15.0	Kuala Lumpur - Kepong - Kuala Selangor	3.3127778 101.4182500	K 2-2

District : SABAK BERNAM

BR501	0	5	506.6	Klang - Sabak Bernam	3.4930000 101.1118330	K 2-2
BR502	3	5	541.7	Kuala Lumpur - Kuala Selangor - Sabak	3.7461667 100.9759722	K 2-2
BR503	3	B44	503.0	Jalan Sg. Panjang - Ulu Bernam - Tg. Malim	3.7309167 101.1036667	T 1-1
BR504	3	B55	65.0	Sabak Bernam - Sungai Ayer Tawar (Sungai Ayer Tawar Road)	3.7589720 100.9039720	T 1-1

District : HULU LANGAT

BR604	1	1	359.8	Kuala Lumpur - Kajang - Telok Datok (Bt 14 Jln Cheras)	2.9991944 101.7850833	T 1-1
BR605	1	1	340.0	Kuala Lumpur - Seremban	2.8685278 101.8698889	T 1-1
BR608	1	B52	3.0	Kuala Lumpur - Cheras-Kampung Ulu Lui (Sg.Serai)	3.0887500 101.7923056	T 1-1
BR609	1	B17	11.6	Kuala Lumpur - Kajang - Telok Datok (Jln. Reko)	2.9683056 101.7897500	K 2-2
BR610	3	B19	1.0	Kuala Lumpur - Ulu Semenyih	2.9534167 101.8460556	T 1-1
BR611	3	31	47.0	Kuala Lumpur - Semenyih - Bangi (1km from Semenyih)	2.9374722 101.8358611	T 1-1
BR612	3	B34	1.0	Kuala Lumpur - Semenyih - Broga	2.9455833 101.8520833	K 2-2
BR613	3	B32	34.0	Kajang - Genting Peras - Jelebu	3.1339722 101.9161389	T 1-1
BR614	1	1	-	Kajang - Mantin	2.9582778 101.8410278	K 2-2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Selangor

District : HULU SELANGOR

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
BR701	1	1	448.0	Kuala Lumpur - Kuala Kubu Bahru Junction (south of junction)	3.5565830	101.6426670	T 1-1
BR702	1	1	466.0	Kuala Lumpur - Tanjong Malim	3.6592222	101.5406389	K 2-2
BR703	3	55	-	Kuala Lumpur - Kuala Kubu Baru - Gap	3.5622778	101.6676389	T 1-1
BR704	3	B56	0.8	Simpang Sg. Choh - Sg. Buaya	3.3565278	101.5763889	T 1-1
BR705	1	B23	26.5	Hulu Gombak - Hulu Yam Baru	3.4091944	101.6632778	T 1-1
BR706	3	B113	3.0	Batang Kali - Hulu Yam	3.4622500	101.6563611	T 1-1
BR707	1	B66	9.0	Jalan Hulu Kali - Genting Highland	3.4285833	101.7294722	T 1-1
BR708	3	B55	56.0	Jalan Ampang Pechah - Kg. Bukit Raja	3.5370370	101.6551780	T 1-1
BR709	3	B44	5.0	Jalan Hulu Bernam - Tanjong Malim	3.6694160	101.5159520	T 1-1
BR710	3	B44	75.3	Jalan Hulu Bernam - Sungai Besar	3.6714444	101.5171667	T 1-1

District : PETALING

BR801	3	54	39.2	Kuala Lumpur - Kuala Selangor	3.2066310	101.5620247	K 2-2
BR802	1	15	-	Kuala Lumpur - Subang Airport	3.1005030	101.5885100	T 1-1
BR803	3	3214	-	Kuala Lumpur - Batu Tiga - Puchong	3.0675880	101.5560910	K 2-2
BR804	3	B9	-	Batu Tiga - Damansara Road	3.0851210	101.5545700	K 3-3
BR806	1	2	-	Kuala Lumpur - Klang	3.0835180	101.6069030	K 3-3
BR807	0	2	-	Kuala Lumpur - Petaling Jaya (Fed. H'way-180m east of EPF bldg)	3.1119700	101.6561250	K 3-3
BR809	3	B13	-	Kuala Lumpur - Sungai Besi (Sungai Besi Road)	3.0485890	101.7069980	K 3-3
BR811	3	3213	-	Jalan Bt. 3 (Opposite Balai Polis Bt. 3)	3.0761900	101.5572320	K 2-2
BR812	3	B16	-	KL - Puchong (km 12 to Sri Kembangan/km 4 to Puchong)	2.9901880	101.6205920	K 3-3
BR813	3	B7	-	Kuala Lumpur - Puchong-Shah Alam	3.0302030	101.5749370	K 3-3
BR814	1	B7	-	Kuala Lumpur - Puchong-Shah Alam	3.0319380	101.5693160	K 2-2
BR815	3	207	-	Kuala Lumpur - Bukit Jalil - Puchong	3.0503060	101.6442150	K 2-2

District : GOMBAK

BR901	1	1	415.5	Kuala Lumpur - Ipoh	3.3041667	101.5952778	T 1-1
BR902	0	28	14.1	Jalan Lingkaran Tengah 2 (MRR2)	3.2406944	101.7178056	K 3-3
BR903	3	28	60.0	Jalan Lingkaran Tengah 2 (MRR2)	3.2352778	101.6850000	K 2-2
BR904	3	B27	39.1	Rawang - Kuala Selangor	3.3191667	101.5161111	T 1-1
BR905	3	B22	9.9	Selayang - Kepong	3.2272222	101.6377778	K 3-3

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Selangor

APRIL 2016

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	Busses	Motorcycles	Total
BR004	-	66,301	5,948	0700-0800	66.8	11.9	3.9	3.4	0.5	13.5	100.0
BR005	-	27,603	2,960	1800-1900	66.7	7.4	7.8	4.8	0.8	12.4	100.0
BR006	-	17,800	1,786	1800-1900	63.0	20.1	4.2	1.6	0.8	10.4	100.0
BR007	-	36,268	4,403	0700-0800	61.5	8.2	3.1	1.1	1.2	25.0	100.0
BR008	-	16,945	1,595	0800-0900	65.1	8.0	5.0	4.1	0.5	17.3	100.0
BR009	-	17,155	1,748	0700-0800	71.5	10.5	2.8	0.9	0.2	14.3	100.0

District : KLANG

BR101	-	166,808	13,441	1800-1900	81.9	4.1	3.6	0.6	0.5	9.3	100.0
BR102	-	53,074	3,926	1800-1900	69.5	5.3	4.0	1.3	0.4	19.4	100.0
BR103	-	63,867	7,240	0800-0900	48.0	3.5	9.3	17.2	0.5	21.5	100.0
BR104	-	52,184	4,756	1200-1300	61.9	5.0	9.2	5.5	0.5	17.8	100.0
BR105	-	44,577	3,859	1800-1900	71.8	5.8	5.1	1.2	0.5	15.6	100.0
BR106	-	96,134	7,142	1700-1800	83.4	4.4	3.5	0.3	0.2	8.1	100.0
BR107	-	85,032	6,752	0700-0800	65.4	7.9	6.3	2.0	0.5	18.0	100.0
BR108	-	125,814	9,348	1700-1800	76.0	2.4	3.0	2.8	0.2	15.8	100.0
BR109	-	40,572	3,767	1200-1300	62.4	5.2	9.6	2.1	0.7	19.9	100.0
BR110	-	41,646	3,395	0800-0900	61.0	6.4	7.7	2.0	0.6	22.4	100.0
BR111	-	36,382	2,981	1800-1900	56.6	4.9	14.5	2.9	1.9	19.2	100.0

District : KUALA LANGAT

BR201	-	44,909	4,719	0700-0800	67.4	8.8	5.2	4.2	0.7	13.6	100.0
BR202	-	61,818	6,290	1800-1900	68.6	8.4	3.9	1.7	0.8	16.6	100.0
BR203	-	8,207	795	1800-1900	56.5	13.4	8.3	3.0	0.6	18.0	100.0
BR204	34,466	30,658	3,545	1800-1900	63.1	11.4	4.6	6.4	0.5	14.1	100.0

District : KUALA SELANGOR

BR401	-	37,665	3,883	0700-0800	59.4	10.1	7.4	6.5	1.2	15.3	100.0
BR402	-	19,578	2,237	1800-1900	53.2	11.6	10.7	7.9	1.0	15.6	100.0
BR403	-	3,573	321	0900-1000	43.0	14.2	12.5	5.9	0.2	24.3	100.0
BR404	-	20,404	2,037	1400-1500	66.5	4.6	4.3	0.4	0.6	23.7	100.0
BR405	-	21,730	2,145	0700-0800	49.6	14.6	11.0	6.9	0.5	17.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Selangor

APRIL 2016

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	Busses	Motorcycles	Total
BR501	32,067	28,231	3,764	1400-1500	70.6	6.8	6.6	4.3	0.3	11.3	100.0
BR502	-	18,271	1,652	1700-1800	51.3	10.2	10.4	11.5	0.2	16.3	100.0
BR503	-	4,426	402	0700-0800	31.9	7.6	8.1	23.7	0.0	28.7	100.0
BR504	-	7,523	858	1700-1800	65.2	6.1	7.3	0.6	0.1	20.8	100.0

District : HULU LANGAT

BR604	-	48,500	3,610	1800-1900	71.6	7.0	2.5	0.4	0.6	18.0	100.0
BR605	-	12,845	1,128	1800-1900	56.9	13.9	5.7	3.6	0.5	19.4	100.0
BR608	-	27,836	2,678	0700-0800	47.4	14.2	4.1	2.4	0.5	31.3	100.0
BR609	-	49,276	3,702	0700-0800	62.6	6.5	2.7	0.5	1.2	26.4	100.0
BR610	-	6,558	643	1800-1900	41.5	15.8	13.8	10.6	0.5	17.7	100.0
BR611	-	22,326	2,693	1800-1900	58.4	15.0	5.7	2.9	0.3	17.7	100.0
BR612	-	17,184	1,421	1800-1900	67.8	8.1	4.7	2.6	0.7	16.0	100.0
BR613	-	866	76	1500-1600	32.0	15.2	10.5	12.9	0.0	29.3	100.0
BR614	-	71,149	6,986	0800-0900	60.5	12.0	5.7	1.5	0.5	19.7	100.0

District : HULU SELANGOR

BR701	-	15,867	1,529	1700-1800	58.9	16.1	10.0	3.2	0.8	11.0	100.0
BR702	-	13,618	1,290	1700-1800	59.8	12.8	7.6	1.4	0.6	17.7	100.0
BR703	-	2,439	213	0800-0900	53.3	11.6	2.6	0.9	0.8	30.7	100.0
BR704	-	18,768	1,667	1100-1200	79.8	7.6	2.1	0.5	0.5	9.5	100.0
BR705	-	7,884	696	1700-1800	64.6	7.8	5.0	0.5	0.1	21.9	100.0
BR706	-	1,710	186	2000-2100	71.2	8.0	3.3	1.2	0.7	15.7	100.0
BR707	-	8,202	713	1700-1800	57.2	13.6	4.4	1.9	1.3	21.5	100.0
BR708	-	8,700	812	1300-1400	69.7	7.3	1.8	0.6	0.3	20.4	100.0
BR709	-	7,195	749	1900-2000	61.7	9.4	2.9	0.8	1.2	23.9	100.0
BR710	-	1,329	148	0800-0900	45.3	10.4	4.0	1.3	1.0	37.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Selangor

APRIL 2016

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	Busses	Motorcycles	Total
BR801	-	52,414	4,430	1700-1800	57.6	12.6	2.3	1.9	0.3	25.3	100.0
BR802	-	63,321	4,205	1700-1800	56.1	4.4	1.7	1.6	0.4	35.8	100.0
BR803	-	123,148	11,448	1700-1800	77.3	9.2	1.0	1.0	0.2	11.3	100.0
BR804	-	84,244	8,180	1400-1500	55.9	8.3	4.9	0.5	0.4	30.0	100.0
BR806	-	250,155	20,868	1700-1800	62.8	6.3	2.9	1.7	0.4	25.9	100.0
BR807	-	318,803	28,879	1700-1800	63.4	5.9	2.4	0.7	0.5	27.0	100.0
BR809	-	195,953	17,310	0900-1000	88.3	3.7	3.7	0.3	0.3	3.7	100.0
BR811	-	16,464	2,315	0800-0900	62.0	10.9	6.0	0.3	0.1	20.7	100.0
BR812	-	91,773	8,356	1300-1400	57.3	11.4	7.1	7.7	0.4	16.1	100.0
BR813	-	74,151	7,700	0800-0900	45.1	21.0	7.5	0.8	0.2	25.5	100.0
BR814	-	62,297	6,152	1700-1800	67.2	10.5	1.7	1.1	0.2	19.3	100.0
BR815	-	70,047	5,606	0800-0900	69.0	13.2	1.2	0.8	0.5	15.3	100.0

District : GOMBAK

BR901	-	82,656	7,313	1700-1800	70.4	9.2	5.7	0.8	0.4	13.6	100.0
BR902	-	133,128	10,894	1800-1900	75.8	7.6	4.9	1.3	0.6	9.8	100.0
BR903	-	86,953	8,593	1700-1800	63.1	15.5	5.4	0.1	0.0	15.9	100.0
BR904	-	27,999	2,700	0700-0800	50.0	17.9	8.8	2.9	0.2	20.2	100.0
BR905	-	52,233	4,424	0700-0800	64.9	11.2	4.7	0.5	0.1	18.6	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Selangor

OCTOBER 2016

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	Busses	Motorcycles	Total
BR004	-	63,860	5,500	1700-1800	67.1	11.1	3.5	4.3	0.6	13.4	100.0
BR005	-	27,789	3,724	1700-1800	53.0	14.7	8.3	5.9	1.7	16.4	100.0
BR006	-	17,843	1,773	1800-1900	63.9	18.5	3.7	2.1	0.7	11.0	100.0
BR007	-	66,329	6,875	1700-1800	82.0	4.0	3.8	2.1	0.9	7.2	100.0
BR008	-	18,142	2,008	1700-1800	65.4	6.9	4.6	6.7	0.4	16.1	100.0
BR009	-	18,126	2,019	1900-2000	73.8	9.3	2.9	0.6	0.1	13.3	100.0

District : KLANG

BR101	-	114,951	11,517	1800-1900	80.3	4.0	3.4	0.9	0.7	10.7	100.0
BR102	-	42,301	3,112	1700-1800	73.1	4.1	3.1	1.4	0.6	17.8	100.0
BR103	-	57,045	7,751	1700-1800	47.4	3.5	9.3	18.5	0.4	21.0	100.0
BR104	-	46,561	4,259	1900-2000	61.6	3.8	9.1	6.7	0.5	18.3	100.0
BR105	-	41,035	3,240	1800-1900	73.3	5.3	4.9	1.1	0.5	14.9	100.0
BR106	-	96,537	7,165	1800-1900	82.1	6.5	3.1	0.5	0.2	7.5	100.0
BR107	-	87,666	7,180	1700-1800	63.1	7.9	5.9	1.7	0.5	21.0	100.0
BR108	-	132,161	10,834	1800-1900	75.4	3.4	2.7	1.6	0.2	16.7	100.0
BR109	-	25,840	2,261	1800-1900	65.6	4.3	7.8	2.6	0.9	18.9	100.0
BR110	-	40,954	4,523	1800-1900	65.7	3.9	6.7	1.9	0.6	21.2	100.0
BR111	-	34,434	4,765	2100-2200	61.9	3.7	12.0	3.1	1.3	18.0	100.0

District : KUALA LANGAT

BR201	-	43,585	3,731	0800-0900	62.8	7.7	8.5	6.3	0.7	14.0	100.0
BR202	-	65,189	6,929	0700-0800	66.6	6.0	3.4	2.5	0.8	20.7	100.0
BR203	-	7,791	675	0700-0800	57.3	14.2	6.8	3.1	0.9	17.7	100.0
BR204	36,432	31,905	2,934	1800-1900	53.4	18.4	5.8	6.5	0.5	15.3	100.0

District : KUALA SELANGOR

BR401	-	37,633	3,597	1200-1300	59.0	12.8	7.4	5.0	1.1	14.6	100.0
BR402	-	18,881	1,945	1700-1800	54.6	12.7	9.6	7.5	1.0	14.6	100.0
BR403	-	4,459	555	1300-1400	46.2	14.0	11.2	8.1	0.1	20.4	100.0
BR404	-	23,302	2,456	1700-1800	65.1	7.7	3.7	0.5	0.5	22.5	100.0
BR405	-	22,824	2,392	0800-0900	50.6	14.0	11.8	7.8	0.4	15.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Selangor

OCTOBER 2016

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	Busses	Motorcycles	Total
BR501	24,123	20,877	1,766	1700-1800	65.9	9.1	8.1	5.1	0.5	11.3	100.0
BR502	-	15,825	1,559	1700-1800	47.7	12.0	13.5	10.1	0.3	16.5	100.0
BR503	-	4,711	407	1800-1900	36.8	8.4	4.9	19.1	0.0	30.7	100.0
BR504	-	8,923	1,080	1700-1800	71.1	5.2	5.9	0.8	0.5	16.6	100.0

District : HULU LANGAT

BR604	-	47,897	3,400	1300-1400	69.0	9.0	2.4	0.5	0.5	18.5	100.0
BR605	-	13,166	1,241	1800-1900	59.0	10.3	5.8	4.2	0.6	20.0	100.0
BR608	-	29,971	2,320	0700-0800	46.8	13.4	5.4	2.7	0.6	31.2	100.0
BR609	-	43,995	3,239	0700-0800	62.3	6.5	3.0	0.6	1.2	26.3	100.0
BR610	-	10,564	977	0700-0800	43.7	13.3	8.2	9.6	0.4	24.8	100.0
BR611	-	30,575	3,548	1700-1800	48.8	15.3	9.4	3.5	0.4	22.5	100.0
BR612	-	19,137	1,749	2000-2100	62.7	10.5	4.6	2.0	0.6	19.7	100.0
BR613	-	683	57	0700-0800	40.7	14.6	8.9	9.5	0.0	26.2	100.0
BR614	-	57,310	5,348	0700-0800	65.0	8.4	4.8	1.4	0.5	19.8	100.0

District : HULU SELANGOR

BR701	-	16,258	1,431	0700-0800	60.3	18.0	7.5	3.1	0.7	10.4	100.0
BR702	-	13,404	1,117	0700-0800	61.6	10.9	7.7	2.2	0.6	17.0	100.0
BR703	-	1,354	143	1200-1300	40.8	13.4	4.7	1.6	0.4	39.1	100.0
BR704	-	17,806	1,699	1700-1800	73.3	5.4	3.9	1.1	0.8	15.4	100.0
BR705	-	8,036	793	1700-1800	59.6	6.4	3.9	0.6	0.1	29.3	100.0
BR706	-	2,121	229	1200-1300	70.3	6.0	4.5	1.2	0.9	17.1	100.0
BR707	-	6,014	525	1800-1900	59.8	14.1	5.4	1.9	1.2	17.6	100.0
BR708	-	9,603	897	1500-1600	74.0	5.7	3.7	0.5	0.7	15.3	100.0
BR709	-	8,040	679	1500-1600	57.9	10.1	5.8	1.1	1.2	23.9	100.0
BR710	-	1,921	188	1800-1900	39.4	11.9	6.2	2.9	0.6	38.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Selangor

OCTOBER 2016

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	Busses	Motorcycles	Total
BR801	-	172,080	17,789	1700-1800	80.1	4.3	0.7	0.4	0.1	14.3	100.0
BR802	-	215,177	17,124	1700-1800	83.0	5.2	0.7	0.5	0.1	10.5	100.0
BR803	-	170,211	16,861	0700-0800	57.0	14.2	9.0	2.4	0.4	17.0	100.0
BR804	-	164,546	12,213	0700-0800	52.8	17.2	7.1	0.9	0.6	21.5	100.0
BR806	-	194,994	16,978	1800-1900	61.2	4.2	4.3	1.2	0.3	28.6	100.0
BR807	-	201,772	18,552	1700-1800	80.1	4.3	0.7	0.4	0.1	14.3	100.0
BR809	-	218,802	17,814	0900-1000	88.1	3.7	3.8	0.3	0.3	3.9	100.0
BR811	-	17,536	1,533	1500-1600	59.8	13.8	5.7	0.1	0.2	20.4	100.0
BR812	-	95,437	8,386	1300-1400	56.7	11.5	7.4	7.8	0.5	16.2	100.0
BR813	-	79,940	7,765	0900-1000	43.4	21.5	7.4	0.8	0.2	26.7	100.0
BR814	-	71,909	7,228	1700-1800	63.6	10.6	2.1	1.2	0.2	22.4	100.0
BR815	-	81,587	14,655	1100-1200	74.3	11.4	1.0	0.5	0.3	12.5	100.0

District : GOMBAK

BR901	-	78,408	6,137	0700-0800	66.8	10.4	5.9	0.7	0.3	15.8	100.0
BR902	171,015	144,294	11,165	1800-1900	79.4	7.1	3.4	1.0	0.4	8.6	100.0
BR903	-	60,218	6,375	0800-0900	64.0	15.9	4.8	0.1	0.0	15.2	100.0
BR904	-	21,132	1,778	0900-1000	50.9	17.1	5.5	2.2	0.7	23.6	100.0
BR905	-	165,146	14,383	0800-0900	59.2	6.2	6.2	2.2	0.4	25.8	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Selangor

AVERAGE 2016

District : SEPANG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
BR004	65,081	5,724	66.9	11.5	3.7	3.8	0.6	13.5	100%	F	R
BR005	27,696	3,342	59.9	11.0	8.0	5.4	1.3	14.4	100%	F	R
BR006	17,821	1,779	63.4	19.3	4.0	1.8	0.8	10.7	100%	E	2017
BR007	51,299	5,639	71.7	6.1	3.4	1.6	1.0	16.1	100%	E	-
BR008	35,087	1,802	65.2	7.4	4.8	5.4	0.5	16.7	100%	F	R
BR009	35,281	1,884	72.6	9.9	2.8	0.7	0.1	13.8	100%	D	2017

District : KLANG

BR101	140,880	12,479	81.1	4.0	3.5	0.7	0.6	10.0	100%	F	R
BR102	47,687	3,519	71.3	4.7	3.6	1.3	0.5	18.6	100%	A	2088
BR103	60,456	7,496	47.7	3.5	9.3	17.9	0.4	21.2	100%	F	R
BR104	49,373	4,508	61.8	4.4	9.2	6.1	0.5	18.0	100%	A	2072
BR105	42,806	3,550	72.5	5.5	5.0	1.2	0.5	15.3	100%	B	2042
BR106	96,336	7,153	82.8	5.4	3.3	0.4	0.2	7.8	100%	F	R
BR107	86,349	6,966	64.2	7.9	6.1	1.8	0.5	19.5	100%	F	R
BR108	128,988	10,091	75.7	2.9	2.9	2.2	0.2	16.2	100%	E	2017
BR109	33,206	3,014	64.0	4.7	8.7	2.3	0.8	19.4	100%	F	R
BR110	41,300	3,959	63.3	5.2	7.2	1.9	0.6	21.8	100%	F	R
BR111	35,408	3,873	59.3	4.3	13.3	3.0	1.6	18.6	100%	F	R

District : KUALA LANGAT

BR201	44,247	4,225	65.1	8.3	6.8	5.2	0.7	13.8	100%	C	2030
BR202	63,504	6,610	67.6	7.2	3.6	2.1	0.8	18.7	100%	F	R
BR203	7,999	735	56.9	13.8	7.6	3.1	0.8	17.9	100%	A	2051
BR204	31,281	3,240	58.3	14.9	5.2	6.4	0.5	14.7	100%	F	R

District : KUALA SELANGOR

BR401	37,649	3,740	59.2	11.5	7.4	5.7	1.2	15.0	100%	C	2040
BR402	19,230	2,091	53.9	12.2	10.1	7.7	1.0	15.1	100%	A	2045
BR403	4,016	438	44.6	14.1	11.8	7.0	0.1	22.4	100%	A	2053
BR404	21,853	2,247	65.8	6.2	4.0	0.4	0.5	23.1	100%	F	R
BR405	22,277	2,269	50.1	14.3	11.4	7.4	0.5	16.4	100%	A	2086

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Selangor

AVERAGE 2016

District : SABAK BERNAM

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
BR501	24,554	2,765	68.3	8.0	7.4	4.7	0.4	11.3	100%	B	2031
BR502	17,048	1,606	49.5	11.1	12.0	10.8	0.3	16.4	100%	A	2044
BR503	4,569	405	34.4	8.0	6.5	21.4	0.0	29.7	100%	A	-
BR504	8,223	969	68.1	5.6	6.6	0.7	0.3	18.7	100%	A	2023

District : HULU LANGAT

BR604	48,199	3,505	70.3	8.0	2.5	0.4	0.5	18.3	100%	F	R
BR605	13,006	1,184	58.0	12.1	5.8	3.9	0.6	19.7	100%	B	-
BR608	28,903	2,499	47.1	13.8	4.8	2.5	0.6	31.3	100%	F	R
BR609	46,636	3,471	62.5	6.5	2.8	0.6	1.2	26.4	100%	B	2026
BR610	8,561	810	42.6	14.5	11.0	10.1	0.5	21.3	100%	B	-
BR611	26,451	3,121	53.6	15.1	7.6	3.2	0.4	20.1	100%	F	R
BR612	18,161	1,585	65.3	9.3	4.6	2.3	0.6	17.9	100%	A	2025
BR613	775	67	36.3	14.9	9.7	11.2	0.0	27.8	100%	A	-
BR614	64,230	6,167	62.8	10.2	5.2	1.5	0.5	19.8	100%	F	R

District : HULU SELANGOR

BR701	16,063	1,480	59.6	17.0	8.8	3.1	0.8	10.7	100%	E	2018
BR702	13,511	1,204	60.7	11.9	7.6	1.8	0.6	17.4	100%	A	-
BR703	1,897	178	47.1	12.5	3.7	1.2	0.6	34.9	100%	A	2056
BR704	18,287	1,683	76.5	6.5	3.0	0.8	0.7	12.4	100%	C	2036
BR705	7,960	745	62.1	7.1	4.4	0.6	0.1	25.6	100%	A	2077
BR706	1,915	207	70.8	7.0	3.9	1.2	0.8	16.4	100%	A	-
BR707	7,108	619	58.5	13.9	4.9	1.9	1.3	19.6	100%	A	2034
BR708	9,152	855	71.8	6.5	2.7	0.6	0.5	17.9	100%	A	2065
BR709	7,618	714	59.8	9.7	4.3	1.0	1.2	23.9	100%	A	-
BR710	1,625	168	42.4	11.2	5.1	2.1	0.8	38.2	100%	A	2034

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Selangor

AVERAGE 2016

District : PETALING

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
BR801	112,247	11,110	68.9	8.4	1.5	1.2	0.2	19.8	100%	F	R
BR802	139,249	10,665	69.6	4.8	1.2	1.0	0.2	23.2	100%	F	R
BR803	146,680	14,155	67.1	11.7	5.0	1.7	0.3	14.1	100%	F	R
BR804	124,395	10,197	54.3	12.7	6.0	0.7	0.5	25.7	100%	F	R
BR806	222,575	18,923	62.0	5.2	3.6	1.5	0.4	27.3	100%	F	R
BR807	260,288	23,716	71.8	5.1	1.6	0.6	0.3	20.7	100%	F	R
BR809	207,378	17,562	88.2	3.7	3.7	0.3	0.3	3.8	100%	F	R
BR811	17,000	1,924	60.9	12.4	5.8	0.2	0.1	20.6	100%	A	2029
BR812	93,605	8,371	57.0	11.4	7.2	7.7	0.5	16.1	100%	F	R
BR813	77,046	7,733	44.3	21.2	7.4	0.8	0.2	26.1	100%	E	2022
BR814	67,103	6,690	65.4	10.5	1.9	1.1	0.2	20.8	100%	F	R
BR815	75,817	10,131	71.7	12.3	1.1	0.7	0.4	13.9	100%	F	R

District : GOMBAK

BR901	80,532	6,725	68.6	9.8	5.8	0.8	0.4	14.7	100%	F	R
BR902	138,711	11,030	77.6	7.3	4.2	1.2	0.5	9.2	100%	F	R
BR903	73,586	7,484	63.5	15.7	5.1	0.1	0.0	15.6	100%	F	R
BR904	24,566	2,239	50.4	17.5	7.2	2.6	0.5	21.9	100%	F	R
BR905	108,690	9,404	62.1	8.7	5.4	1.3	0.3	22.2	100%	F	R

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Selangor

District : SEPANG

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
BR004	35,867	36,575	44,072	53,252	53,673	51,485	57,683	63,597	68,578	65,081	7.2	0.90
BR005	27,411	21,878	32,971	24,946	28,140	29,373	32,280	36,159	25,094	27,696	1.4	0.08
BR006	13,735	14,621	15,838	17,256	19,603	17,011	26,643	20,847	22,201	17,821	4.7	0.51
BR007	-	-	-	68,166	80,875	64,854	91,523	87,554	66,348	51,299	-3.4	0.13
BR008	-	-	-	17,904	16,655	33,969	33,908	31,675	33,869	35,087	12.0	0.63
BR009	-	-	-	14,750	13,561	23,471	30,621	27,566	28,503	35,281	15.2	0.79

District : KLANG

BR101	123,437	94,591	104,201	103,515	91,005	128,931	142,038	124,226	140,640	140,880	3.7	0.44
BR102	42,452	47,817	46,690	52,901	53,983	57,835	56,513	52,563	49,706	47,687	1.3	0.18
BR103	71,212	55,135	71,532	66,090	71,297	68,957	65,872	55,881	77,972	60,456	-0.2	0.00
BR104	35,940	59,230	52,893	53,429	56,127	56,044	52,447	45,270	50,775	49,373	0.6	0.01
BR105	32,363	38,562	41,338	44,030	46,574	45,911	46,587	39,623	41,558	42,806	1.8	0.24
BR106	63,473	76,439	79,057	94,404	118,734	101,095	96,518	103,959	97,271	96,336	4.1	0.47
BR107	73,095	72,095	91,094	90,918	89,381	94,676	94,351	111,139	86,906	86,349	2.4	0.34
BR108	115,023	129,408	122,468	141,121	135,678	140,780	143,223	136,424	131,348	128,988	1.1	0.22
BR109	39,311	37,321	36,315	32,174	34,501	35,025	37,540	39,440	35,272	33,206	-0.6	0.08
BR110	37,081	39,130	40,798	39,588	42,084	43,890	44,564	49,585	43,956	41,300	1.9	0.50
BR111	37,938	40,515	47,543	40,677	44,995	38,626	41,693	38,891	34,594	35,408	-1.7	0.28

District : KUALA LANGAT

BR201	37,772	38,597	41,048	41,443	48,678	35,126	37,352	44,922	50,001	44,247	1.9	0.23
BR202	56,532	52,459	55,814	52,429	56,444	53,809	64,219	55,501	65,496	63,504	1.9	0.47
BR203	6,324	6,711	7,023	7,101	6,852	7,128	7,777	7,741	7,890	7,999	2.5	0.89
BR204	25,319	26,203	27,159	29,916	29,299	32,117	31,669	29,535	31,199	31,281	2.3	0.70

District : KUALA SELANGOR

BR401	35,745	39,750	43,210	34,266	35,376	34,238	35,485	46,517	37,696	37,649	0.3	0.01
BR402	18,657	16,825	16,866	16,133	16,686	19,872	22,195	23,605	18,623	19,230	2.3	0.30
BR403	2,789	2,554	2,751	3,379	3,126	3,438	3,110	3,154	3,159	4,016	3.2	0.57
BR404	9,815	11,377	13,014	13,263	12,848	14,132	12,750	19,427	23,711	21,853	8.7	0.82
BR405	20,631	19,332	20,938	22,822	23,003	23,648	21,278	22,618	21,611	22,277	1.0	0.26

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Selangor

District : SABAK BERNAM

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
BR501	18,224	17,354	19,773	20,466	21,743	23,370	22,174	22,443	20,838	24,554	3.0	0.69
BR502	12,118	12,676	16,100	15,806	16,081	15,892	15,046	16,161	17,138	17,048	3.1	0.62
BR503	3,614	3,666	3,101	2,893	2,849	2,453	2,487	2,468	3,289	4,569	-0.2	0.00
BR504	4,665	2,516	4,671	7,330	7,664	7,410	6,649	7,421	7,290	8,223	8.8	0.53

District : HULU LANGAT

BR604	42,272	57,286	58,929	56,609	57,591	53,689	59,023	54,222	48,737	48,199	-0.2	0.00
BR605	14,178	13,538	13,960	11,834	11,927	11,947	11,341	11,999	12,465	13,006	-1.4	0.28
BR608	38,656	37,338	38,264	33,086	28,098	27,617	27,877	28,572	30,374	28,903	-3.7	0.64
BR609	30,474	41,555	40,369	50,648	54,987	62,314	56,205	53,977	53,020	46,636	4.5	0.42
BR610	12,805	15,335	6,815	11,424	12,860	12,222	11,525	11,120	9,090	8,561	-2.9	0.14
BR611	6,538	9,051	10,155	15,392	14,877	16,207	18,778	17,554	19,083	26,451	12.9	0.89
BR612	5,913	5,858	7,864	10,737	11,973	13,654	15,346	16,728	16,364	18,161	13.5	0.92
BR613	906	924	972	789	830	691	488	603	640	775	-4.9	0.46
BR614	36,043	62,612	63,914	65,123	66,174	70,499	79,801	83,329	84,275	64,230	5.6	0.50

District : HULU SELANGOR

BR701	9,723	12,307	13,209	18,293	13,430	13,320	15,082	15,022	15,538	16,063	3.8	0.43
BR702	12,476	13,464	13,308	14,827	12,429	10,994	12,624	13,556	12,323	13,511	-0.3	0.01
BR703	1,383	986	1,134	1,123	1,073	1,703	1,267	1,572	1,990	1,897	6.2	0.564
BR704	19,665	17,387	16,508	10,307	26,689	23,697	16,769	17,283	22,759	18,287	1.7	0.0386
BR705	8,326	6,041	7,186	8,785	8,147	8,172	8,240	8,836	8,035	7,960	1.5	0.16
BR706	11,404	9,985	10,764	8,297	10,525	12,997	12,144	9,824	10,594	1,915	-8.9	0.24
BR707	4,674	5,336	4,228	4,504	5,047	7,131	6,677	7,405	5,994	7,108	5.4	0.60
BR708	7,209	7,599	7,287	6,928	7,951	7,211	8,415	9,286	6,792	9,152	1.9	0.2523
BR709	8,215	8,837	8,433	7,189	8,276	9,591	6,126	7,309	4,560	7,618	-3.9	0.2987
BR710	1,010	909	946	807	1,248	1,410	5,309	1,271	4,535	1,625	13.8	0.40

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Selangor

District : PETALING

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
BR801	88,809	131,808	178,059	206,864	207,643	146,240	156,700	119,307	53,045	112,247	-4.5	0.11
BR802	71,927	89,164	80,427	95,650	142,062	150,838	176,171	228,163	175,841	139,249	10.8	0.71
BR803	63,989	72,350	91,091	94,410	101,892	109,350	140,230	114,847	120,929	146,680	8.2	0.8666
BR804	71,940	100,452	102,542	142,364	68,660	130,436	128,947	113,281	75,401	124,395	2.3	0.07
BR806	224,828	250,359	292,856	274,278	281,803	280,347	242,844	249,898	219,634	222,575	-1.3	0.14
BR807	454,874	394,821	337,370	369,479	313,431	349,936	348,056	357,032	383,080	260,288	-3.0	0.39
BR809	238,130	81,330	172,931	158,945	157,546	203,738	163,442	190,774	201,043	207,378	3.6	0.1359
BR811	9,554	12,368	15,865	17,487	18,609	16,372	20,525	19,037	26,605	17,000	7.2	0.6078
BR812	194,263	189,045	108,030	106,137	129,074	102,649	149,789	100,944	134,666	93,605	-5.1	0.3519
BR813	83,556	107,642	121,609	91,437	122,191	221,495	72,274	102,022	151,632	77,046	0.4	0.00
BR814	67,472	68,934	82,000	78,876	60,675	112,538	98,459	94,404	108,972	67,103	3.1	0.1843
BR815	112,122	112,600	65,762	133,701	109,705	133,308	167,137	136,854	171,629	75,817	2.4	0.06

District : GOMBAK

BR901	73,100	69,161	70,271	85,300	82,766	83,885	81,958	66,189	75,365	80,532	0.7	0.05
BR902	159,324	137,870	150,213	129,345	144,334	151,486	147,449	144,308	129,579	138,711	-0.9	0.15
BR903	50,963	62,931	62,126	77,375	139,717	93,510	78,087	84,126	152,619	73,586	6.5	0.32
BR904	15,546	13,038	15,214	16,004	13,897	15,104	14,795	30,382	15,694	24,566	5.3	0.36
BR905	148,278	192,982	150,585	164,292	276,234	271,289	242,876	263,361	89,040	108,690	-2.6	0.04

STATISTIC FOR YEAR 2016

State : Selangor

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

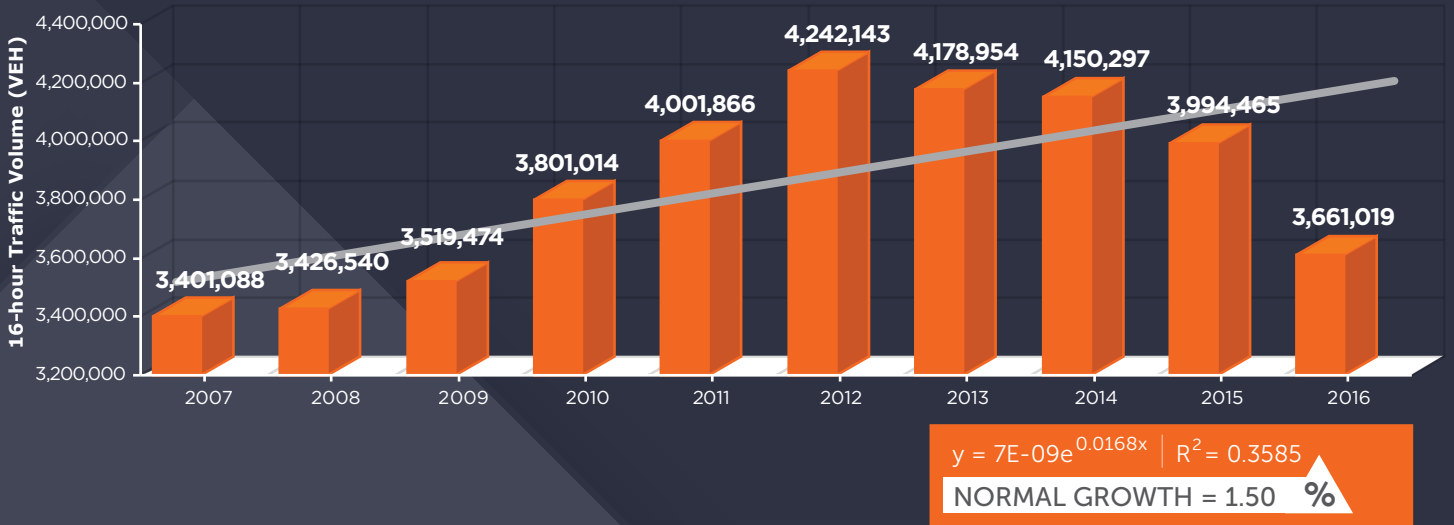




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Selangor



SELANGOR

The state of Selangor consists of 66 census stations. The 16-hour traffic volume indicates a steady growth from the year 2007 until the year 2012. However, there is a decline in traffic volume for the year 2013 until 2016. The figure shows that there is a decrease of 9.60% from the 2015 to 2016.

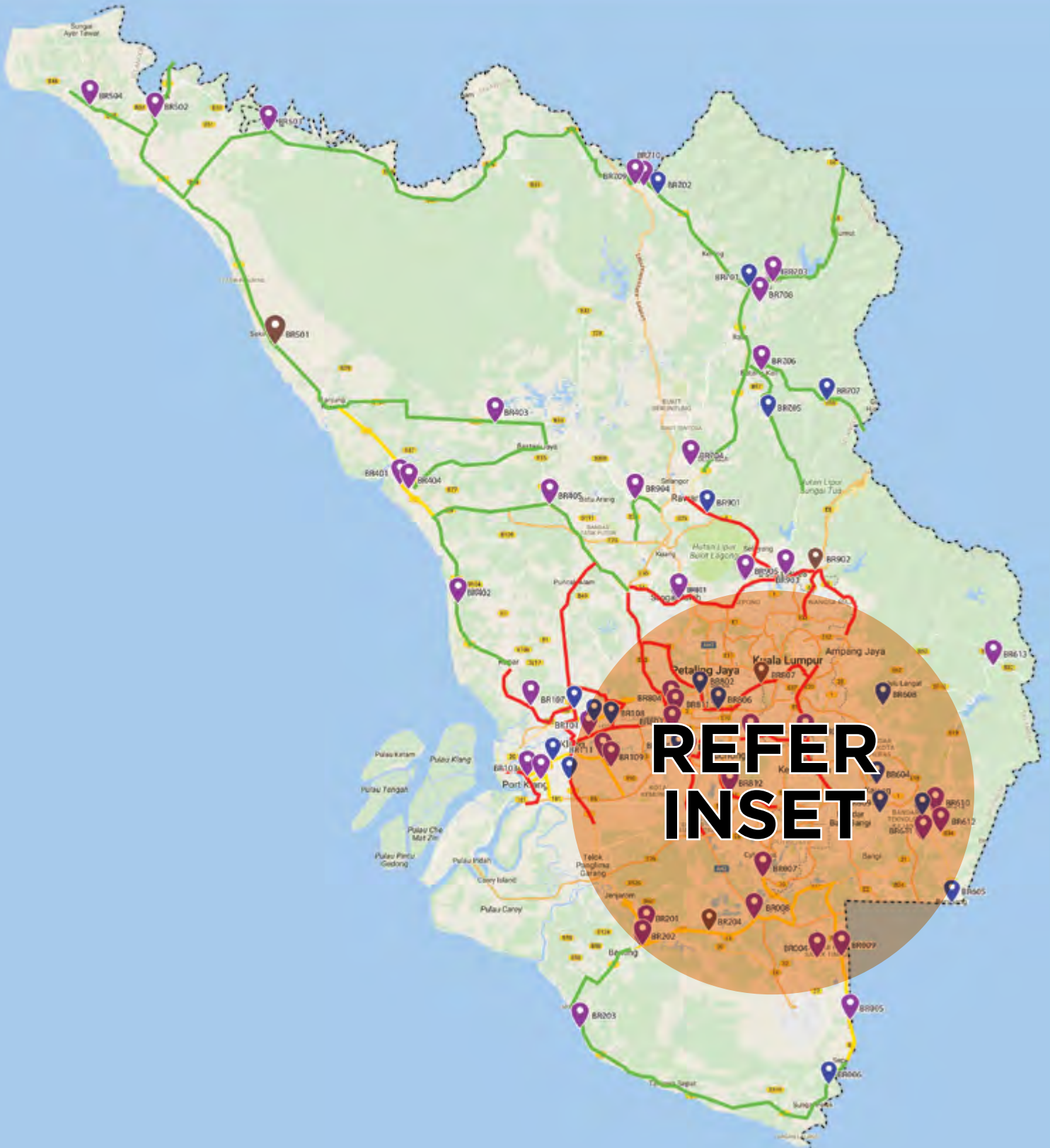
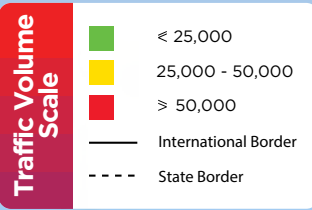


-9.60%
Decrease

For the year 2016, the observed traffic growth rate for the state of Selangor is 1.50%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Selangor.

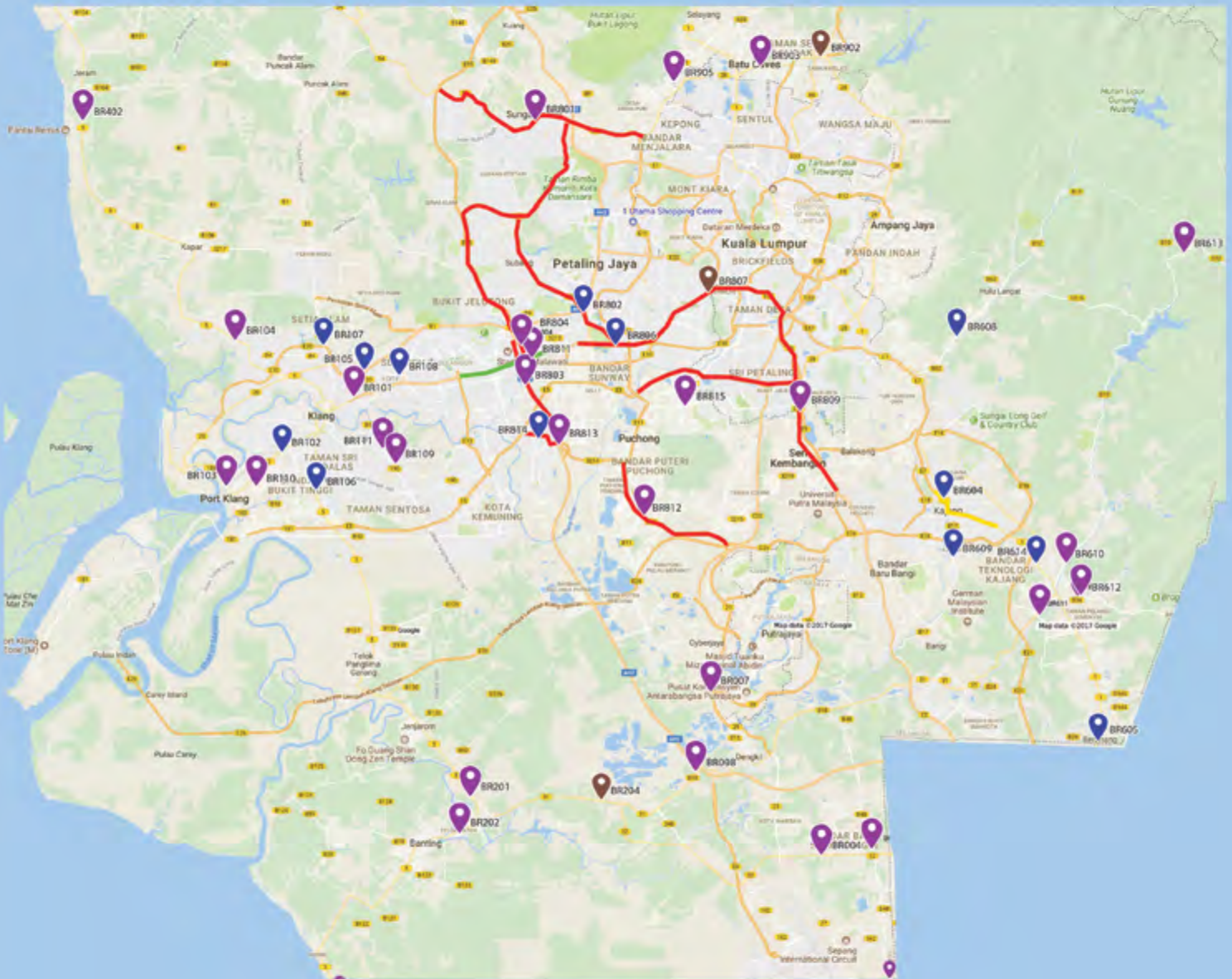
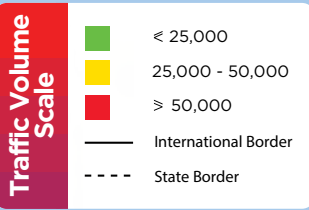
AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Selangor



AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Selangor







W. P. KUALA LUMPUR






Tanjakan Kuchai Lebuhraya NPE

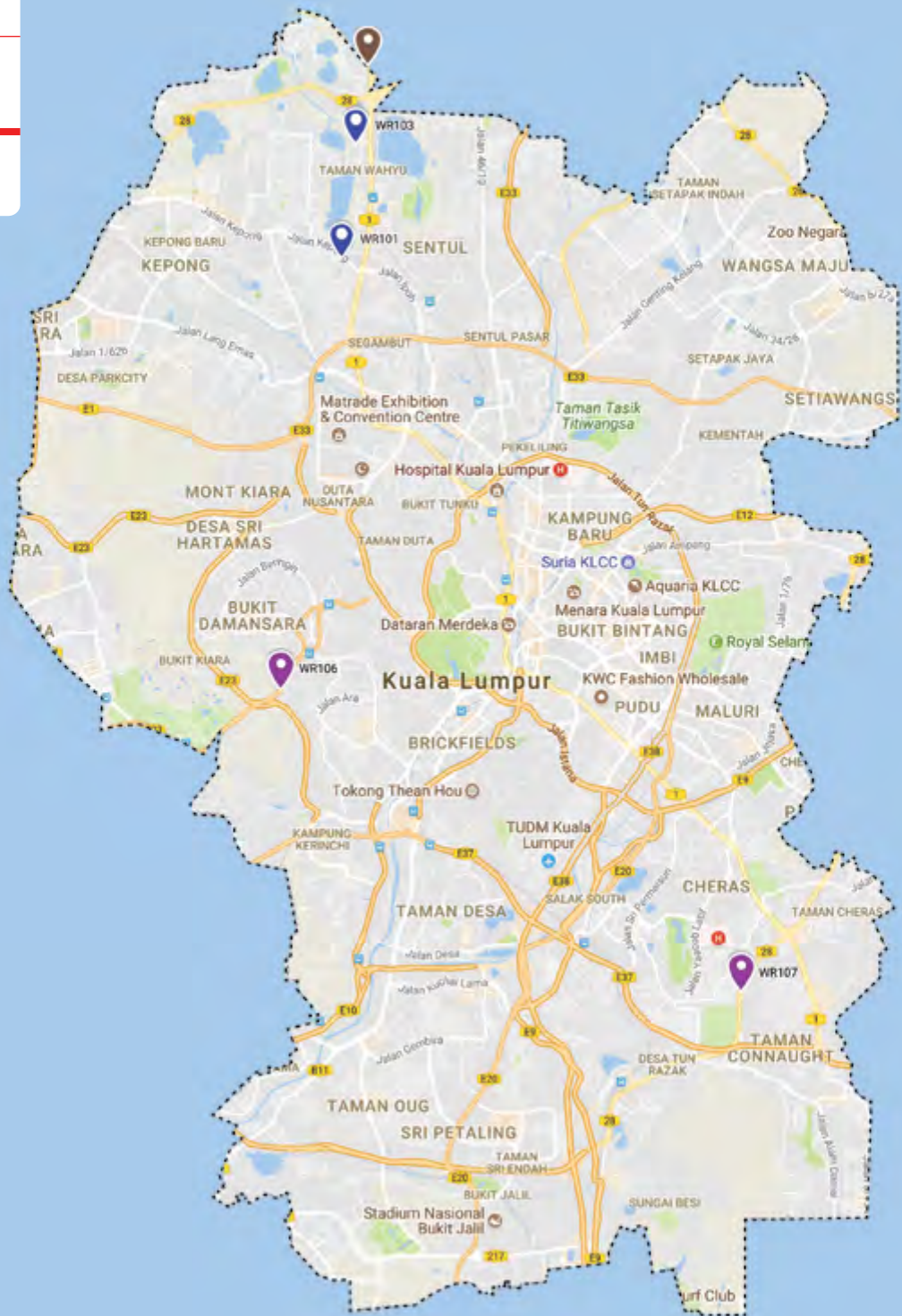
- Kuchai Lama
- 1539.46 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

State : W. P. Kuala Lumpur

LEGEND

CENSUS STATIONS TYPE	
	TYPE 0
	TYPE 1
	TYPE 3
	International Border
	State Border



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 (WGS84) (Latitude, Longitude)		Type of Carriageway
WR101	1	54	8.9	Kuala Lumpur - Kuala Selangor (Jalan Kepong)	3.2051944	101.6673611	K 3-3
WR102	0	1	12.1	Kuala Lumpur - Ipoh	3.2356667	101.6714722	K 3-3
WR103	1	1	8.1	Kuala Lumpur - Ipoh	3.2229444	101.6696944	K 3-3
WR106	3	W106	5.8	Kuala Lumpur - Damansara	3.0755556	101.7023333	K 3-3
WR107	3	28		NKVE-MRR2	3.1381389	101.6577778	K 3-3

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : W. P. Kuala Lumpur

APRIL 2016

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
WR101	-	132,029	10,083	1000-1100	68.4	11.4	3.5	0.3	0.5	15.8	100.0
WR102	194,049	194,049	14,929	1700-1800	58.7	12.7	4.7	1.0	0.4	22.4	100.0
WR103	296,918	237,284	22,642	2000-2100	76.2	5.1	4.7	0.4	0.4	13.2	100.0
WR106	-	123,196	9,756	1400-1500	81.6	2.8	1.0	0.1	0.1	14.3	100.0
WR107	-	164,863	15,158	0700-0800	66.3	7.4	4.3	1.6	0.2	20.1	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : W. P. Kuala Lumpur

OCTOBER 2016

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
WR101	-	113,347	7,787	1800-1900	62.9	7.5	2.7	2.0	0.4	24.5	100.0
WR102	173,857	144,386	10,899	0800-0900	60.3	6.6	3.7	3.3	0.3	25.8	100.0
WR103	-	174,089	13,509	1800-1900	60.5	6.2	3.4	4.1	0.4	25.4	100.0
WR106	-	121,935	10,505	1700-1800	76.3	6.6	1.7	0.2	0.1	15.0	100.0
WR107	-	135,602	19,121	0800-0900	69.2	5.6	4.6	2.5	0.3	17.8	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : W. P. Kuala Lumpur

AVERAGE 2016

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
WR101	122,688	8,935	65.7	9.5	3.1	1.2	0.5	20.1	100%	E	-
WR102	169,218	12,914	59.5	9.7	4.2	2.2	0.4	24.1	100%	F	R
WR103	205,686	18,076	68.3	5.7	4.1	2.2	0.4	19.3	100%	F	R
WR106	122,566	10,131	79.0	4.7	1.4	0.2	0.1	14.7	100%	F	R
WR107	150,233	17,140	67.7	6.5	4.5	2.0	0.3	19.0	100%	F	R

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : W. P. Kuala Lumpur

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
WR101	132,245	138,727	190,272	153,564	136,860	139,737	160,694	132,401	111,097	122,688	-2.4	0.23
WR102	158,754	161,161	214,746	277,797	276,092	252,341	253,179	214,760	211,188	169,218	1.3	0.03
WR103	203,986	205,867	194,287	196,796	209,224	203,277	216,424	192,223	162,596	205,686	-0.8	0.10
WR106	290,967	270,123	239,685	253,903	225,435	204,487	161,751	155,777	145,108	122,566	-9.5	0.9552
WR107										150,233		

STATISTIC FOR YEAR 2016

State : W. P. Kuala Lumpur

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

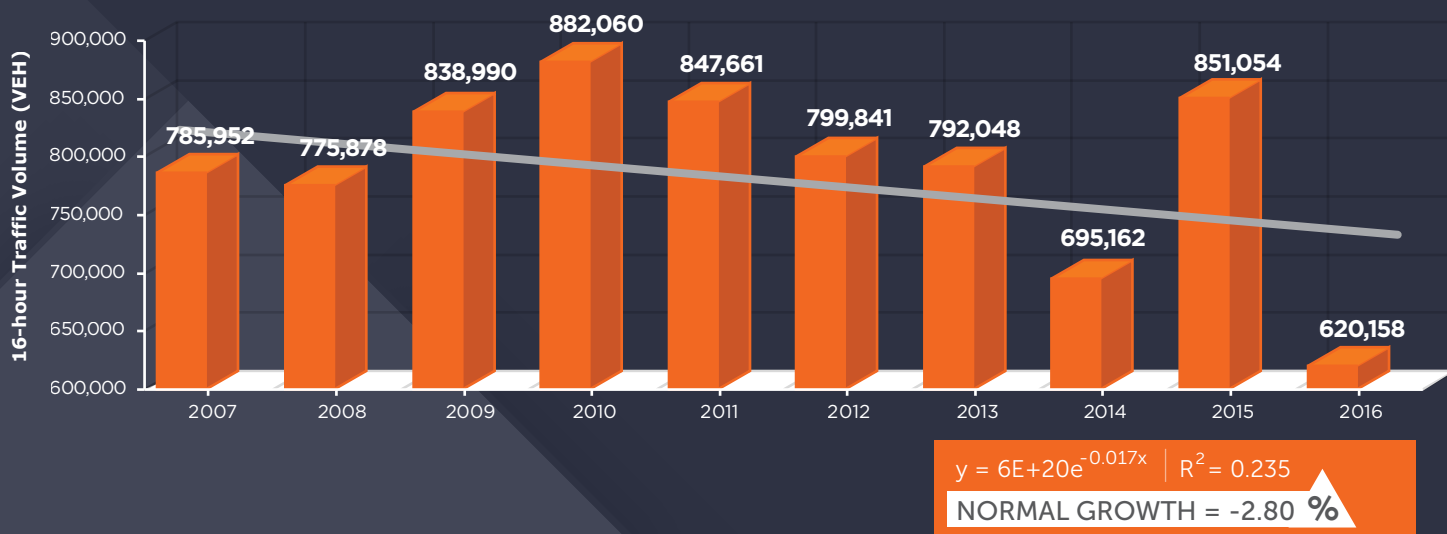
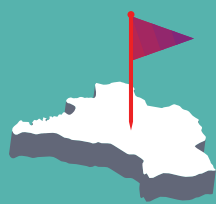


Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in W.P. Kuala Lumpur



W.P. KUALA LUMPUR

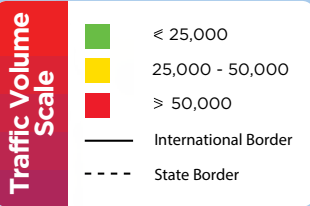
There are 5 census stations in Wilayah Persekutuan Kuala Lumpur. The pattern of 16hour traffic volume has fluctuated since the year 2007 until the year 2016. Between the year 2015 and 2016, there is a huge difference between the traffic volumes by 27.13% which shows that the number of vehicles in the year 2016 has decreased by 230,896.

-27.13%
Decrease

For the year 2016, the observed traffic growth rate for the state of Wilayah Persekutuan Kuala Lumpur is 2.80%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Wilayah Persekutuan Kuala Lumpur.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : W. P. Kuala Lumpur







N. SEMBILAN

**Senawang Upgrade Road - LEKAS Intersection,
Negeri Sembilan**

- Seremban, Negeri Sembilan
 - 2014
- Upgrade on Level of Service at Route FT51 Intersection (Jalan Paroi - Senawang) dan LEKAS di Senawang
 - 15627.02 KM
- Road Facilities Maintenance Division, JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

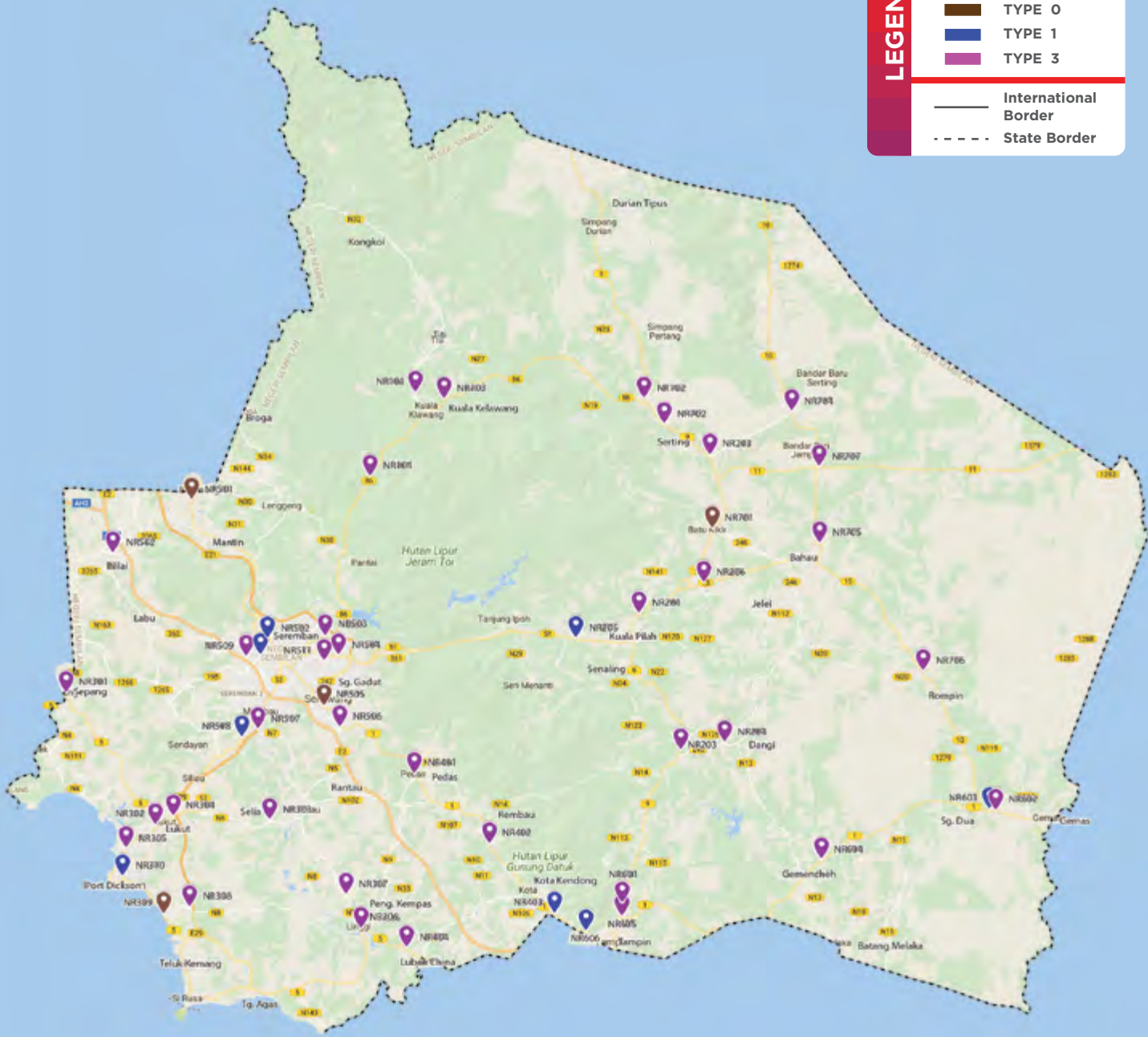
State : Negeri Sembilan

LEGEND

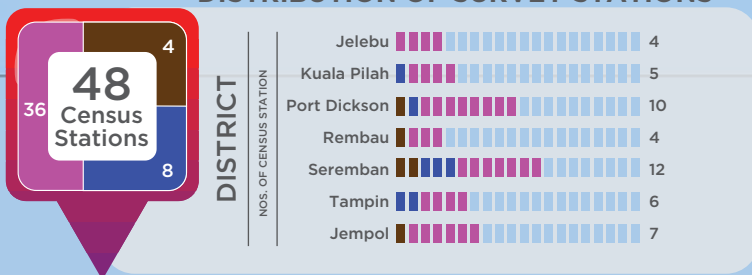
CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



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 (WGS84) (Latitude, Longitude)		Type of Carriageway
NR101	3	N32	2.5	Kuala Klawang - Genting Peras	2.9522222	102.0597222	T 1-1
NR102	3	9	72.0	Kuala Pilah - Manchis (Simpang Pertang)	2.9469444	102.2594444	T 1-1
NR103	3	86	1.6	Kuala Klawang - Simpang Pertang (Peradong)	2.9466667	102.0844444	T 1-1
NR104	3	86	26.8	Seremban - Kuala Klawang	2.8791667	102.0200000	T 1-1

District : KUALA PILAH

NR201	3	9	42.7	Tampin - Kuala Pilah - Batu Kikir	2.7595830	102.2553330	T 1-1
NR203	3	9	19.3	Tampin - Kuala Pilah	2.6398889	102.2917500	T 1-1
NR204	3	N17	3.8	Dangi - Kepis - Jelai	2.6466944	102.3298611	T 1-1
NR205	1	51	33.0	Seremban - Kuala Pilah	2.7379167	102.1999722	T 1-1
NR206	3	13	2.1	Juasseh - Bahau	2.7863889	102.3114444	T 1-1

District : PORT DICKSON

NR301	3	5	26.3	Sepang - Port Dickson (Tanah Merah)	2.6900556	101.7537778	T 1-1
NR302	3	5	8.5	Sepang - Port Dickson (Lukut)	2.5740278	101.8323333	K 2-2
NR303	3	N6	4.8	Rantau - Siliu	2.5785833	101.9322500	T 1-1
NR304	3	53	10.2	Seremban - Port Dickson (Lukut)	2.5818889	101.8477222	K 2-2
NR305	3	5	4.0	Seremban - Port Dickson	2.5538056	101.8065278	K 2-2
NR306	3	5	41.6	Port Dickson - Lubok Cina (Linggi)	2.4832222	102.0120833	T 1-1
NR307	3	N7	28.7	Seremban - Rantau - Linggi	2.5130278	101.9989722	T 1-1
NR308	3	N8	16.1	Jalan Rantau/Linggi - camp Si Rusa - Port Dickson	2.5022778	101.8618889	T 1-1
NR309	0	5	6.4	Port Dickson - Lubok Cina (Jalan Pantai)	2.4964444	101.8395000	T 1-1
NR310	1	5	30.6	Seremban - Port Dickson (Port Dickson Bypass)	2.5296389	101.8032222	K 2-2

District : REMBAU

NR401	3	1	20.9	Seremban - Tampin	2.6191944	102.0590833	T 1-1
NR402	3	1	33.0	Seremban - Tampin	2.5577500	102.1246667	T 1-1
NR403	1	1	41.7	Seremban - Tampin	2.4964722	102.1815556	T 1-1
NR404	3	5	46.7	Linggi - Lubok Cina	2.4666667	102.0520833	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Negeri Sembilan

District : SEREMBAN

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
NR501	0	1	20.0	Seremban - Kuala Lumpur (Old road)	2.8586110	101.8636110	T 1-1
NR502	1	1	2.5	Seremban - Kuala Lumpur (Old road)	2.7375000	101.9302500	T 1-1
NR503	3	86	9.7	Seremban - Kuala Klawang	2.7395830	101.9805280	T 1-1
NR504	3	51	9.7	Seremban - Kuala Pilah	2.7227778	101.9925000	K 2-2
NR505	0	1	9.3	Seremban - Gemas (Sri Senawang Industrial Area)	2.6782780	101.9796670	K 2-2
NR506	3	N5	9.7	Seremban - Sungai Gadut / Ulu Sawah	2.6595000	101.9935278	T 1-1
NR507	3	N7	11.3	Seremban - Kuala Sawah	2.6577220	101.9218060	T 1-1
NR508	1	53	11.4	Seremban - Port Dickson	2.6510830	101.9075830	T 1-1
NR509	3	362	1.3	Seremban - Labu	2.7216667	101.9116667	T 1-1
NR510	1	241	1.3	Sg. Ujong (in front of Shell)	2.7227778	101.9241944	K 2-2
NR511	3	97	9.0	Paroi - Senawang	2.7176940	101.9795830	T 1-1
NR512	3	32	2.5	Nilai - KLIA	2.8122222	101.7950000	K 2-2

District : TAMPIN

NR601	3	9	3.2	Tampin - Kuala Pilah	2.5060556	102.2402778	T 1-1
NR602	3	1	96.8	Seremban - Gemas (140m east of Rompin junction)	2.5870556	102.5673611	T 1-1
NR603	1	1	95.8	Seremban - Gemas (60m west of Rompin junction)	2.5878890	102.5618060	T 1-1
NR604	3	1	77.3	Seremban - Gemas	2.5438611	102.4147222	T 1-1
NR605	3	1	52.8	Seremban - Gemas	2.4942222	102.2399167	T 1-1
NR606	1	1	46.5	Seremban - Tampin	2.4814722	102.2087778	T 1-1

District : JEMPOL

NR701	0	9	55.5	Seremban - Batu Kikir - Bahau	2.8336940	102.3189440	K 2-2
NR702	3	9	70.8	Kuala Pilah - Manchis (Serting Ulu)	2.9251110	102.2769440	T 1-1
NR703	3	245	3.2	Serting Ulu - Ayer Hitam	2.8978611	102.3169722	K 2-2
NR704	3	10	16.9	Bahau - Ayer Hitam - Kemayan	2.9361944	102.3885556	T 1-1
NR705	3	10	4.8	Bahau - Kemayan	2.8208333	102.4129444	K 2-2
NR706	3	10	82.1	Bahau - Rompin	2.7091667	102.5037778	K 2-2
NR707	3	11	62.5	Lebuhraya Bahau - Keratong	2.8874167	102.4126111	K 2-2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Negeri Sembilan

APRIL 2016

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	Busses	Motorcycles	Total
NR101	-	14,754	1,891	1700-1800	57.9	8.5	2.5	0.7	0.2	30.2	100.0
NR102	-	3,632	287	1700-1800	48.7	10.0	8.8	4.3	0.2	28.0	100.0
NR103	-	11,402	2,064	0700-0800	52.8	14.2	4.3	1.3	0.2	27.2	100.0
NR104	-	7,724	905	1700-1800	67.5	11.3	4.4	2.3	0.3	14.2	100.0

District : KUALA PILAH

NR201	-	9,342	889	0700-0800	65.2	9.3	4.8	5.0	1.4	14.2	100.0
NR203	-	3,001	251	1800-1900	58.5	9.7	8.6	2.5	0.5	20.2	100.0
NR204	-	1,667	175	1800-1900	47.6	9.6	8.2	4.5	0.5	29.7	100.0
NR205	-	25,297	2,216	1700-1800	69.1	10.1	4.2	2.7	1.8	12.1	100.0
NR206	-	5,144	487	1000-1100	63.4	13.8	5.3	1.5	1.5	14.5	100.0

District : PORT DICKSON

NR301	-	19,154	1,721	1900-2000	74.7	7.9	4.9	3.7	0.5	8.2	100.0
NR302	-	26,326	2,216	1900-2000	69.7	9.9	5.9	3.8	0.5	10.1	100.0
NR303	-	8,029	708	1800-1900	44.6	15.9	6.2	3.3	0.8	29.3	100.0
NR304	-	45,267	4,514	1900-2000	75.9	8.4	4.6	2.8	0.6	7.7	100.0
NR305	-	51,956	5,628	1900-2000	77.3	8.7	3.0	1.9	0.5	8.6	100.0
NR306	-	6,019	506	1700-1800	44.8	12.2	4.7	1.3	0.9	36.1	100.0
NR307	-	5,330	552	0700-0800	51.6	13.9	5.4	2.0	0.8	26.3	100.0
NR308	-	14,183	2,200	0700-0800	59.0	16.2	2.1	0.7	0.3	21.6	100.0
NR309	33,839	29,285	2,329	1700-1800	68.9	8.4	2.2	0.4	0.6	19.6	100.0
NR310	-	20,323	1,881	0700-0800	70.9	7.7	2.6	2.1	0.4	16.3	100.0

District : REMBAU

NR401	2,680	2,680	299	0700-0800	63.4	7.6	5.9	3.8	0.6	18.7	100.0
NR402	2,772	2,596	210	1700-1800	59.9	8.1	6.5	3.0	0.9	21.6	100.0
NR403	-	12,881	1,117	1700-1800	67.7	7.8	8.7	3.1	0.7	12.0	100.0
NR404	588	588	59	1800-1900	47.5	11.7	11.8	7.4	0.1	21.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Negeri Sembilan

APRIL 2016

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	Busses	Motorcycles	Total
NR501	11,984	10,802	933	0700-0800	62.7	8.4	6.6	4.4	0.5	17.4	100.0
NR502	-	39,462	2,966	1800-1900	68.8	8.9	3.9	0.4	0.3	17.7	100.0
NR503	-	17,237	1,932	0700-0800	67.2	7.8	5.7	3.1	0.3	16.0	100.0
NR504	-	22,177	2,047	0700-0800	67.0	8.2	6.4	4.6	1.0	12.8	100.0
NR505	54,969	49,570	4,199	1700-1800	66.3	9.7	6.3	2.2	0.5	15.0	100.0
NR506	-	12,495	1,533	0700-0800	56.4	8.9	7.3	1.1	0.7	25.7	100.0
NR507	-	19,079	1,811	1700-1800	57.7	9.5	7.7	3.6	0.6	20.9	100.0
NR508	-	17,705	1,467	0700-0800	65.2	6.0	5.4	1.7	0.6	21.2	100.0
NR509	-	22,997	1,822	1700-1800	65.7	12.5	4.9	2.5	0.3	14.2	100.0
NR510	-	53,913	3,957	1200-1300	77.7	7.3	1.9	0.2	1.1	11.7	100.0
NR511	-	18,143	2,076	0700-0800	67.9	7.2	5.4	1.6	0.1	17.9	100.0
NR512	-	25,819	1,966	0800-0900	70.0	11.9	3.3	1.8	0.6	12.3	100.0

District : TAMPIN

NR601	-	4,243	363	1700-1800	54.7	7.7	5.6	4.1	1.1	26.8	100.0
NR602	-	13,474	1,138	1700-1800	59.7	12.1	6.1	6.7	0.6	14.8	100.0
NR603	-	11,932	998	1700-1800	61.4	11.4	6.8	6.2	0.6	13.6	100.0
NR604	-	10,110	989	0700-0800	58.1	9.3	8.2	5.9	0.8	17.8	100.0
NR605	-	10,022	960	1700-1800	63.8	9.4	7.3	3.3	0.6	15.6	100.0
NR606	-	15,445	1,304	1700-1800	68.2	8.4	5.5	2.4	0.7	14.7	100.0

District : JEMPOL

NR701	24,459	22,126	1,933	1700-1800	56.6	16.8	6.4	6.2	0.4	13.6	100.0
NR702	-	6,278	673	0700-0800	50.8	13.8	7.0	5.2	0.5	22.5	100.0
NR703	-	5,492	503	0600-0700	44.0	17.9	8.4	9.0	0.2	20.4	100.0
NR704	-	7,584	745	1800-1900	41.1	15.0	8.9	12.6	0.3	22.2	100.0
NR705	-	21,460	1,835	1700-1800	56.9	17.5	5.9	3.6	0.3	15.8	100.0
NR706	-	8,654	950	1700-1800	50.2	15.8	6.3	5.3	0.6	21.8	100.0
NR707	-	10,643	933	1700-1800	54.2	17.8	7.5	8.2	0.6	11.8	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Negeri Sembilan

OCTOBER 2016

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	Busses	Motorcycles	Total
NR101	-	14,510	2,963	0700-0800	51.7	7.3	2.4	0.7	0.2	37.7	100.0
NR102	-	3,764	310	1400-1500	49.8	9.8	9.2	4.0	0.2	26.9	100.0
NR103	-	13,575	1,321	1400-1500	48.8	14.5	4.4	1.4	0.2	30.7	100.0
NR104	-	7,049	1,001	0700-0800	65.4	11.9	5.6	1.7	0.4	14.9	100.0

District : KUALA PILAH

NR201	-	16,579	1,506	1700-1800	65.6	8.5	6.2	6.5	1.4	11.8	100.0
NR203	-	5,928	596	0700-0800	58.9	8.3	7.4	2.9	0.6	22.0	100.0
NR204	-	3,300	280	1800-1900	52.8	6.2	7.6	2.9	0.6	29.9	100.0
NR205	-	24,493	2,142	1700-1800	71.1	7.9	4.1	3.1	0.9	12.9	100.0
NR206	-	9,902	835	1700-1800	65.5	10.2	5.7	3.3	1.7	13.6	100.0

District : PORT DICKSON

NR301	-	19,712	3,218	0700-0800	76.7	7.2	5.1	3.8	0.4	6.8	100.0
NR302	-	28,622	2,516	1700-1800	70.0	8.8	5.9	4.5	0.5	10.3	100.0
NR303	-	4,954	409	1400-1500	44.9	7.8	8.5	4.2	1.0	33.7	100.0
NR304	-	37,323	4,078	1700-1800	75.5	8.7	5.0	3.1	0.6	7.1	100.0
NR305	-	54,358	5,313	0700-0800	77.8	7.7	3.3	2.3	0.5	8.4	100.0
NR306	-	3,078	300	1700-1800	50.2	9.1	8.1	1.4	1.1	30.2	100.0
NR307	-	3,381	331	1800-1900	52.8	8.4	9.3	2.3	0.9	26.2	100.0
NR308	-	9,623	1,594	0700-0800	70.0	5.6	2.9	0.6	0.4	20.6	100.0
NR309	32,844	2,476	2,476	1700-1800	68.8	7.3	2.2	0.2	0.7	20.7	100.0
NR310	-	20,222	1,810	0700-0800	60.3	14.3	2.1	2.5	0.5	20.3	100.0

District : REMBAU

NR401	-	20,304	2,231	0700-0800	65.8	6.3	6.9	2.1	0.4	18.5	100.0
NR402	-	11,403	2,231	0700-0800	61.5	8.1	10.1	3.5	0.9	15.9	100.0
NR403	-	12,593	1,046	1800-1900	65.1	8.8	9.1	2.8	0.8	13.4	100.0
NR404	-	2,945	353	0900-1000	46.8	13.8	14.1	5.6	0.3	19.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Negeri Sembilan

OCTOBER 2016

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	Busses	Motorcycles	Total
NR501	12,307	11,167	965	0700-0800	58.7	10.4	7.5	5.0	0.7	17.7	100.0
NR502	-	39,294	3,409	0700-0800	72.5	6.6	4.0	0.4	0.3	16.3	100.0
NR503	-	13,673	1,261	1200-1300	76.4	10.8	1.2	0.5	0.3	10.9	100.0
NR504	-	19,838	2,209	0700-0800	67.5	10.9	5.0	3.9	1.4	11.3	100.0
NR505	52,770	48,362	4,124	1700-1800	68.4	7.7	6.1	1.9	0.4	15.5	100.0
NR506	-	10,713	1,263	0700-0800	59.0	11.5	4.4	0.9	0.8	23.5	100.0
NR507	-	15,206	1,447	0700-0800	58.1	11.0	5.6	2.9	1.0	21.4	100.0
NR508	-	14,467	1,327	1800-1900	65.1	6.5	5.4	1.8	0.9	20.2	100.0
NR509	-	21,953	2,125	0700-0800	64.0	13.9	6.5	2.0	0.5	13.1	100.0
NR510	-	51,110	3,768	1800-1900	79.1	6.4	2.1	0.2	1.4	10.8	100.0
NR511	-	17,106	2,195	0700-0800	67.9	9.5	3.6	1.7	0.3	17.1	100.0
NR512	-	26,577	2,216	1300-1400	73.4	11.0	2.9	1.3	0.4	11.0	100.0

District : TAMPIN

NR601	-	4,509	401	0700-0800	54.6	7.9	5.2	3.9	0.9	27.5	100.0
NR602	-	12,077	1,067	1700-1800	55.1	11.6	8.1	8.6	0.6	16.0	100.0
NR603	-	12,417	1,008	1700-1800	59.8	11.5	7.1	6.8	0.7	14.1	100.0
NR604	-	9,538	853	0700-0800	55.2	11.0	8.4	8.6	1.0	15.8	100.0
NR605	-	9,900	890	0700-0800	61.1	9.4	7.7	3.3	0.8	17.7	100.0
NR606	-	14,563	1,205	1700-1800	68.2	9.0	5.5	2.5	0.8	14.1	100.0

District : JEMPOL

NR701	25,064	22,787	2,131	1700-1800	56.7	16.5	8.7	6.7	0.4	10.9	100.0
NR702	-	5,282	524	1700-1800	47.5	15.0	8.6	6.6	0.4	22.0	100.0
NR703	-	3,225	284	1200-1300	50.6	12.3	5.7	2.6	0.1	28.7	100.0
NR704	-	13,182	1,265	1400-1500	41.4	14.5	8.7	10.5	0.3	24.7	100.0
NR705	-	24,224	2,086	1600-1700	52.3	17.3	7.3	6.4	0.3	16.4	100.0
NR706	-	9,203	1,198	1400-1500	48.3	17.3	7.7	5.3	0.5	20.9	100.0
NR707	-	10,732	1,006	1600-1700	48.7	19.4	10.6	7.1	0.7	13.5	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Negeri Sembilan

AVERAGE 2016

District : JELEBU

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
NR101	14,632	2,427	54.8	7.9	2.5	0.7	0.2	34.0	100%	F	R
NR102	3,698	299	49.2	9.9	9.0	4.2	0.2	27.5	100%	A	2187
NR103	12,489	1,693	50.8	14.3	4.4	1.4	0.2	28.9	100%	F	R
NR104	7,387	953	66.4	11.6	5.0	2.0	0.4	14.6	100%	A	2038

District : KUALA PILAH

NR201	12,961	1,198	65.4	8.9	5.5	5.7	1.4	13.0	100%	B	-
NR203	4,465	424	58.7	9.0	8.0	2.7	0.5	21.1	100%	A	-
NR204	2,484	228	50.2	7.9	7.9	3.7	0.5	29.8	100%	A	-
NR205	24,895	2,179	70.1	9.0	4.2	2.9	1.4	12.5	100%	F	R
NR206	7,523	661	64.5	12.0	5.5	2.4	1.6	14.0	100%	A	-

District : PORT DICKSON

NR301	19,433	2,470	75.7	7.6	5.0	3.7	0.4	7.5	100%	F	R
NR302	27,474	2,366	69.8	9.4	5.9	4.2	0.5	10.2	100%	A	2059
NR303	6,492	559	44.8	11.8	7.4	3.7	0.9	31.5	100%	A	2063
NR304	41,295	4,296	75.7	8.5	4.8	2.9	0.6	7.4	100%	E	-
NR305	53,157	5,471	77.6	8.2	3.2	2.1	0.5	8.5	100%	F	R
NR306	4,549	403	47.5	10.6	6.4	1.3	1.0	33.2	100%	A	2170
NR307	4,356	442	52.2	11.2	7.4	2.1	0.9	26.3	100%	A	2098
NR308	11,903	1,897	64.5	10.9	2.5	0.7	0.4	21.1	100%	F	R
NR309	15,881	2,403	68.8	7.8	2.2	0.3	0.7	20.2	100%	F	R
NR310	20,273	1,845	65.6	11.0	2.3	2.3	0.5	18.3	100%	A	2087

District : REMBAU

NR401	11,492	1,265	64.6	6.9	6.4	2.9	0.5	18.6	100%	C	-
NR402	6,999	1,220	60.7	8.1	8.3	3.2	0.9	18.7	100%	C	-
NR403	12,737	1,081	66.4	8.3	8.9	2.9	0.7	12.7	100%	B	-
NR404	1,767	206	47.1	12.8	13.0	6.5	0.2	20.4	100%	A	-

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Negeri Sembilan

AVERAGE 2016

District : SEREMBAN

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
NR501	10,984	949	60.7	9.4	7.1	4.7	0.6	17.6	100%	A	-
NR502	39,378	3,187	70.7	7.7	3.9	0.4	0.3	17.0	100%	F	R
NR503	15,455	1,597	71.8	9.3	3.4	1.8	0.3	13.4	100%	D	2021
NR504	21,008	2,128	67.3	9.5	5.7	4.2	1.2	12.1	100%	A	2039
NR505	48,966	4,162	67.3	8.7	6.2	2.1	0.4	15.3	100%	C	2022
NR506	11,604	1,398	57.7	10.2	5.8	1.0	0.8	24.6	100%	C	-
NR507	17,143	1,629	57.9	10.2	6.7	3.3	0.8	21.1	100%	E	2018
NR508	16,086	1,397	65.1	6.2	5.4	1.8	0.8	20.7	100%	C	2023
NR509	22,475	1,974	64.9	13.2	5.7	2.2	0.4	13.6	100%	F	R
NR510	52,512	3,862	78.4	6.9	2.0	0.2	1.2	11.3	100%	C	-
NR511	17,625	2,136	67.9	8.3	4.5	1.6	0.2	17.5	100%	F	R
NR512	26,198	2,091	71.7	11.4	3.1	1.6	0.5	11.6	100%	A	2035

District : TAMPIN

NR601	4,376	382	54.7	7.8	5.4	4.0	1.0	27.2	100%	A	-
NR602	12,776	1,103	57.4	11.9	7.1	7.7	0.6	15.4	100%	D	2024
NR603	12,174	1,003	60.6	11.4	6.9	6.5	0.7	13.8	100%	A	2037
NR604	9,824	921	56.6	10.1	8.3	7.3	0.9	16.8	100%	A	-
NR605	9,961	925	62.4	9.4	7.5	3.3	0.7	16.7	100%	A	-
NR606	15,004	1,255	68.2	8.7	5.5	2.5	0.8	14.4	100%	A	2141

District : JEMPOL

NR701	22,456	2,032	56.6	16.7	7.6	6.4	0.4	12.3	100%	A	2038
NR702	5,780	599	49.2	14.4	7.8	5.9	0.5	22.3	100%	A	2125
NR703	4,359	394	47.3	15.1	7.1	5.8	0.1	24.6	100%	A	2092
NR704	10,383	1,005	41.2	14.7	8.8	11.5	0.3	23.4	100%	B	2045
NR705	22,842	1,961	54.6	17.4	6.6	5.0	0.3	16.1	100%	A	2090
NR706	8,929	1,074	49.2	16.5	7.0	5.3	0.5	21.4	100%	A	-
NR707	10,688	970	51.4	18.6	9.0	7.7	0.6	12.7	100%	A	2151

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Negeri Sembilan

District : JELEBU

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
NR101	11,955	13,053	13,221	15,191	12,810	12,553	12,699	12,550	12,894	14,632	0.6	0.05
NR102	3,836	3,689	3,636	3,588	4,135	4,444	4,439	3,803	4,026	3,698	0.7	0.08
NR103	6,338	7,442	8,312	9,454	9,899	9,486	9,274	10,220	9,425	12,489	5.3	0.75
NR104	4,574	5,081	6,795	6,104	6,527	6,305	7,081	5,494	6,192	7,387	3.1	0.38

District : KUALA PILAH

NR201	13,311	15,078	15,159	18,275	16,325	13,054	18,015	17,366	8,726	12,961	-2.2	0.09
NR203	4,927	4,626	3,847	3,177	5,212	4,738	3,616	3,568	1,783	4,465	-4.6	0.20
NR204	2,678	2,858	2,707	2,823	3,255	3,671	3,576	3,408	1,955	2,484	-0.8	0.02
NR205	19,251	19,844	19,809	21,601	23,422	24,579	24,141	23,984	24,572	24,895	3.1	0.85
NR206	8,909	8,417	7,219	8,339	10,185	9,202	8,927	8,884	4,968	7,523	-2.5	0.14

District : PORT DICKSON

NR301	28,788	28,144	28,268	35,671	17,207	27,411	24,273	27,331	22,956	19,433	-3.5	0.2569
NR302	48,624	38,945	51,177	46,261	36,334	39,319	41,120	46,479	35,197	27,474	1.8	0.4533
NR303	4,643	4,724	5,802	5,165	5,574	5,667	5,448	5,216	5,304	6,492	2.1	0.42
NR304	58,328	68,327	67,092	65,580	46,201	54,394	59,864	62,112	57,613	41,295	-2.9	0.29
NR305	98,122	106,925	102,377	106,143	72,372	96,685	74,129	87,872	74,402	53,157	-5.8	0.61
NR306	3,823	3,778	4,248	4,093	4,871	3,881	3,608	3,848	3,798	4,549	0.3	0.01
NR307	3,488	3,877	4,352	4,377	5,105	4,013	3,995	4,165	4,662	4,356	1.6	0.20
NR308	5,017	5,289	8,097	6,699	7,353	8,453	7,799	6,971	8,601	11,903	6.7	0.66
NR309	24,011	27,032	32,047	26,376	26,645	27,367	27,534	27,745	28,624	15,881	-2.4	0.15
NR310	19,246	17,693	19,613	17,602	20,705	19,254	19,573	19,659	22,274	20,273	1.4	0.38

District : REMBAU

NR401	21,891	15,867	18,231	16,353	17,326	16,856	17,427	16,004	18,419	11,492	-3.2	0.35
NR402	12,051	11,614	11,621	11,678	12,620	11,775	9,910	9,332	10,536	6,999	-4.4	0.57
NR403	13,456	12,990	13,073	12,690	12,565	12,832	12,645	11,459	12,465	12,737	-0.9	0.39
NR404	2,382	2,631	2,848	2,694	2,913	2,674	2,673	2,744	2,716	1,767	-1.7	0.12

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Negeri Sembilan

District : SEREMBAN

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
NR501	15,418	14,329	12,530	12,052	11,964	11,397	10,671	11,810	11,870	10,984	-3.1	0.67
NR502	41,477	40,839	44,119	43,126	42,148	39,784	39,538	34,353	38,853	39,378	-1.4	0.39
NR503	7,009	24,952	9,793	10,778	14,080	11,882	13,933	14,754	15,649	15,455	3.9	0.13
NR504	14,104	18,121	17,048	17,423	18,817	19,923	20,620	20,937	20,520	21,008	3.7	0.78
NR505	38,284	38,197	33,697	35,708	38,378	57,639	50,484	48,002	47,976	48,966	4.3	0.52
NR506	16,542	16,955	16,879	20,621	22,052	22,302	23,784	21,647	13,851	11,604	-1.8	0.05
NR507	13,261	14,115	15,974	17,087	17,825	18,194	17,083	17,802	18,232	17,143	2.8	0.61
NR508	13,023	13,264	6,218	14,728	15,310	16,349	15,911	15,820	15,831	16,086	4.9	0.26
NR509	17,259	18,692	14,456	21,511	22,881	25,373	25,246	27,050	25,733	22,475	5.1	0.57
NR510	64,193	65,787	67,554	58,814	58,337	60,592	60,615	57,729	52,092	52,512	-2.5	0.76
NR511	19,171	19,362	20,111	17,400	17,875	19,044	17,951	18,800	18,772	17,625	-0.7	0.21
NR512	15,724	18,200	18,414	21,625	25,022	25,048	22,912	26,634	24,621	26,198	5.3	0.78

District : TAMPIN

NR601	3,911	4,218	4,504	4,040	4,096	4,177	3,964	3,826	3,726	4,376	-0.4	0.05
NR602	9,234	10,161	10,632	10,726	10,240	11,614	11,234	11,639	12,166	12,776	3.0	0.88
NR603	9,635	10,331	10,723	10,231	10,855	11,816	11,791	11,582	12,220	12,174	2.5	0.87
NR604	10,171	10,580	11,050	11,312	10,837	11,007	10,976	11,142	9,739	9,824	-0.6	0.10
NR605	9,089	9,349	9,359	9,721	10,055	9,894	9,477	7,220	7,594	9,961	-1.2	0.10
NR606	13,689	14,890	14,431	13,993	15,056	14,965	14,986	14,747	14,961	15,004	0.7	0.41

District : JEMPOL

NR701	14,349	15,388	15,845	16,407	16,020	19,559	17,685	17,289	20,380	22,456	4.2	0.81
NR702	5,039	5,645	5,865	5,739	6,242	5,391	5,587	6,362	5,536	5,780	0.8	0.12
NR703	2,719	3,203	5,933	6,629	4,667	4,322	4,802	5,537	4,695	4,359	3.4	0.14
NR704	9,114	7,098	7,103	7,304	8,321	8,072	7,610	7,670	7,692	10,383	1.3	0.11
NR705	25,634	24,334	26,119	21,951	21,282	26,948	31,858	30,974	28,123	22,842	1.3	0.09
NR706	9,132	10,743	9,510	7,911	8,456	8,160	7,920	7,466	8,492	8,929	-1.9	0.29
NR707	11,943	9,087	9,094	12,438	12,944	10,892	10,616	13,490	9,353	10,688	0.3	0.00

STATISTIC FOR YEAR 2016

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

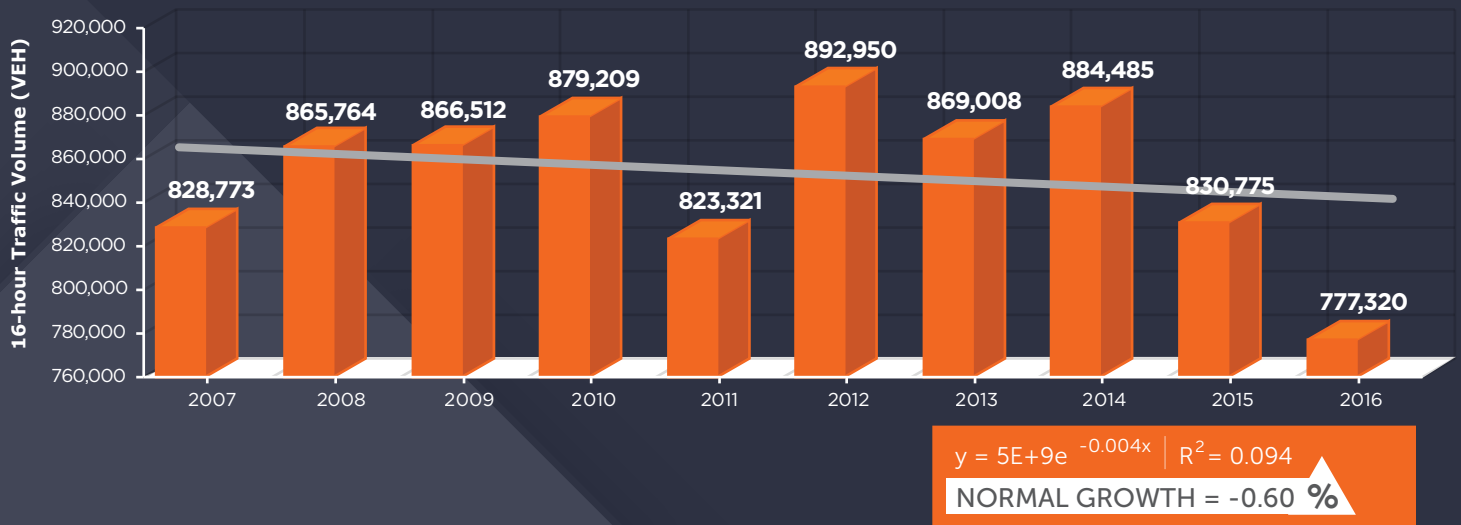


Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Negeri Sembilan



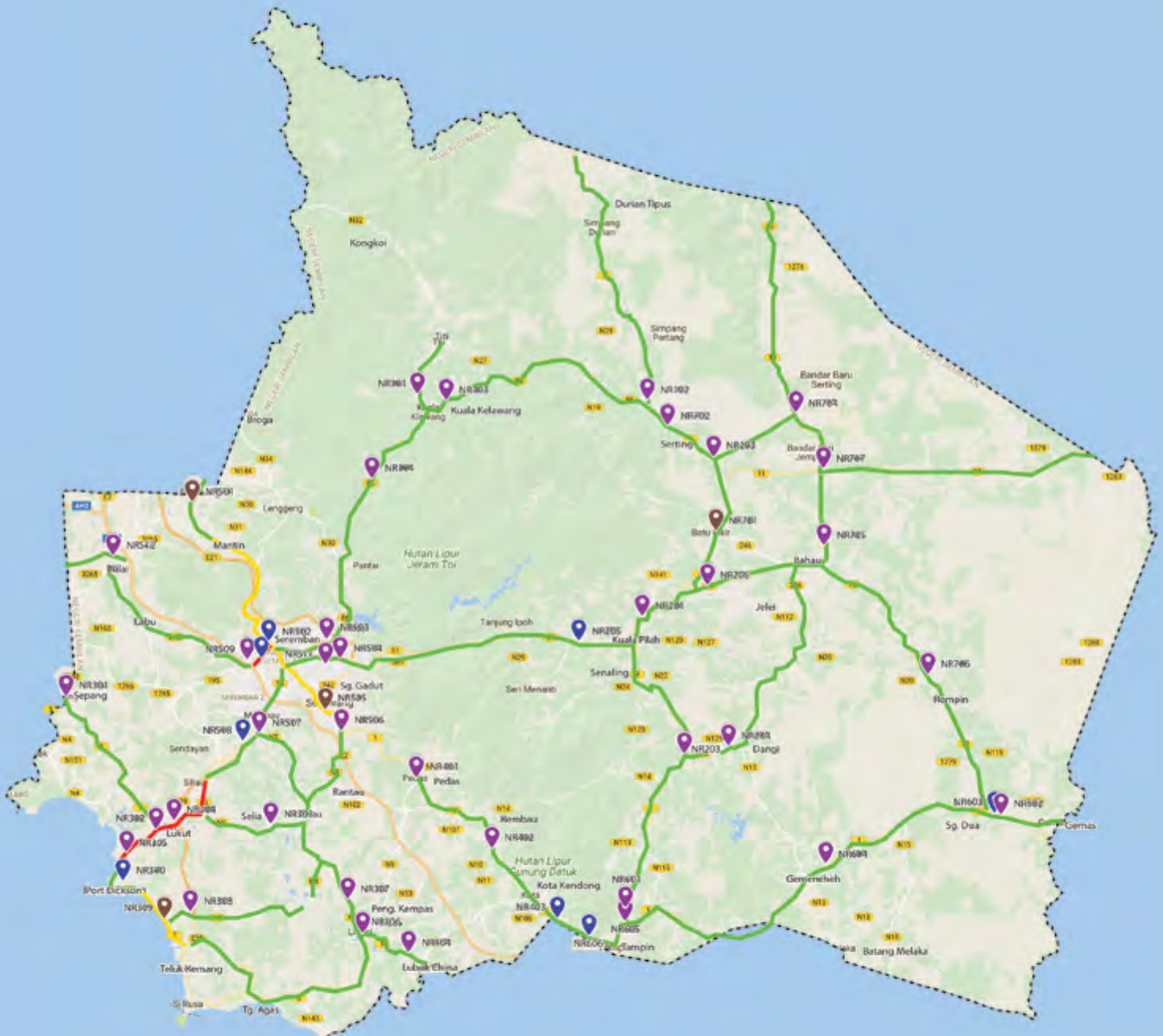
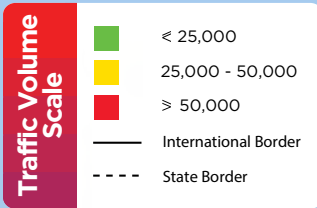
In Negeri Sembilan, there are 48 census stations. The yearly 16-hour traffic volume from the year 2007 until 2016 displays the least traffic volume in the years 2011 and year 2016 which were 823,321 and 777,320 vehicles respectively. The traffic volume also dropped 6.43% from the year 2015 to the year 2016.

-6.43%
Decrease

For the year 2016, the observed traffic growth rate for the state of Wilayah Negeri Sembilan is 0.60%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Negeri Sembilan.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Negeri Sembilan





MELAKA

Al-Azim Bridge

- Al-Azim Intersection
(Across Batu Berendam Road – Taming Sari Road)
 - 2007
- Al-Azim Bridge is built according to JKR R5 road standards as a twin highway with semi-partial controls, enabling a maximum limit speed limit of 90 km/h. It was built to overcome traffic congestion at Al-Azim intersection.
 - 4522.71 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

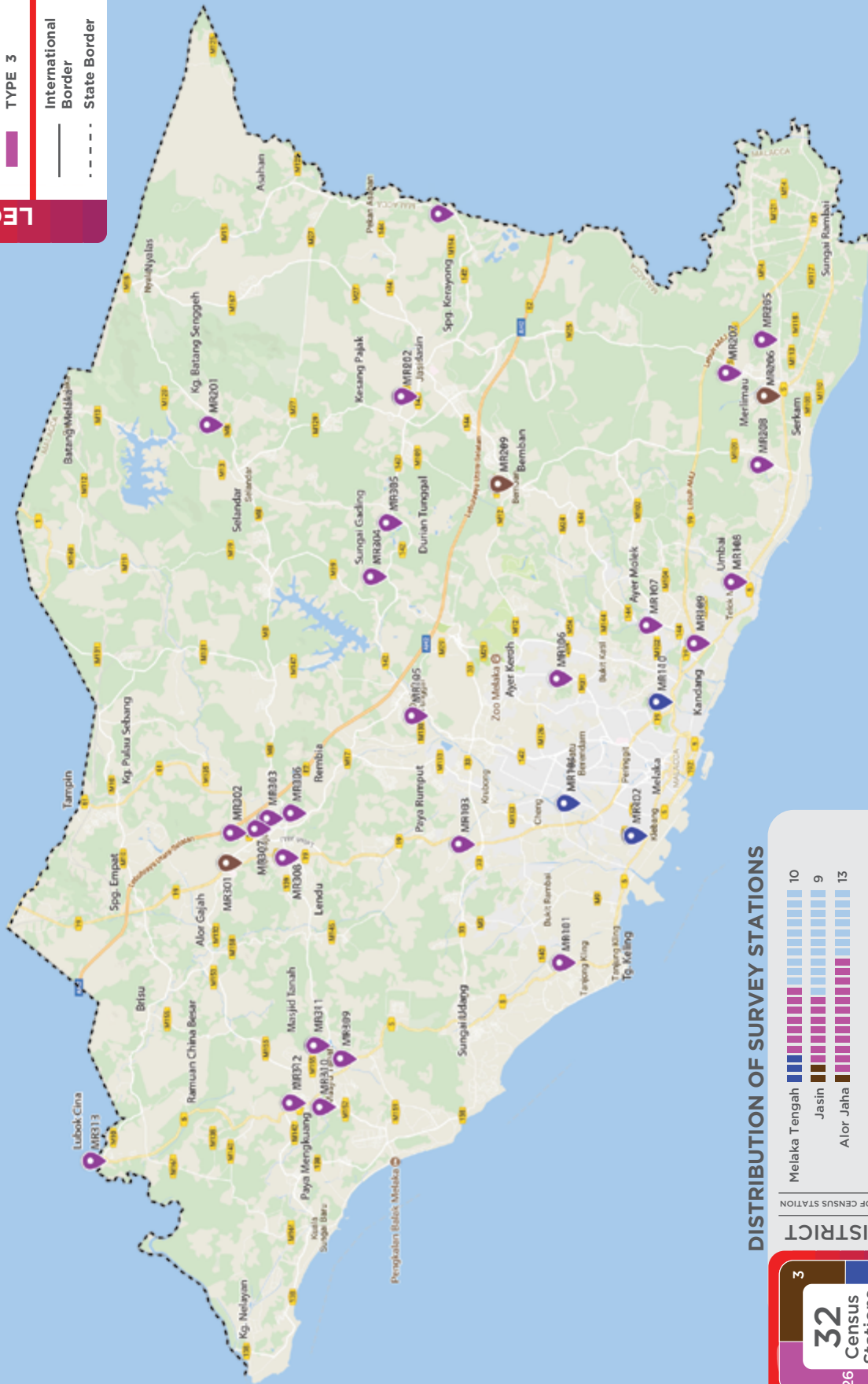
State : Melaka

CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

LEGEND

- International Border
- State Border



DISTRIBUTION OF SURVEY STATIONS



DISTRICT

32
Census Stations

26

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Melaka

District : MELAKA TENGAH

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
MR101	3	5	14.2	Jalan Melaka - Masjid Tanah	2.2388611	102.1603056	T 1-1
MR102	1	5	5.2	Jalan Melaka - Sungai Udang	2.2069550	102.2181030	T 1-1
MR103	3	19	11.3	Lebuh AMJ (Melaka - Alor Gajah)	2.2852778	102.2143056	T 1-1
MR104	1	19	5.0	Lebuh AMJ (Melaka - Kendong)	2.2370400	102.2330310	K 2-2
MR105	3	M2	9.7	Melaka - Durian Tunggal	2.3071200	102.2729520	K 2-2
MR106	3	M31	14.0	Jalan Bukit Katil	2.2410410	102.2900260	K 2-2
MR107	3	M27	9.7	Melaka - Kampung Kandang - Bemban	2.1993200	102.3142900	T 1-1
MR108	3	5	12.1	Jalan Melaka - Muar	2.1612222	102.3344167	T 1-1
MR109	3	5	4.0	Jalan Melaka-Muar (Bandar Hilir - Kg. Kendong road)	2.1777090	102.3064210	T 1-1
MR110	1	5	3.2	Jalan Melaka - Muar	2.1953230	102.2790330	K 3-3

District : JASIN

MR201	3	M8	38.6	Selandar - Nyalas	2.4000278	102.4056667	T 1-1
MR202	3	M2	35.4	Durian Tunggal - Jasin	2.3116389	102.4180278	T 1-1
MR203	3	M2	38.6	Jasin - Kampong Chohong	2.2953056	102.5021944	T 1-1
MR204	3	M2	32.2	Jasin - Simpang Kerayong	2.2950278	102.5021944	T 1-1
MR205	3	M14	24.2	Merlimau - Batu Gajah	2.1476944	102.4445556	T 1-1
MR206	0	5	22.9	Jalan Melaka - Muar	2.1460000	102.4189444	T 1-1
MR207	3	M25	24.2	Merlimau - Jasin	2.1635278	102.4299167	T 1-1
MR208	3	M109	32.2	Serkam - Bemban	2.1495000	102.3876667	T 1-1
MR209	0	144	2.1	Jasin - Bemban	2.2673889	102.3784444	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Melaka

District : ALOR GAJAH

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)	Type of Carriageway
MR301	0	19	25.0	Lebu AMJ (Alor Gajah - Kendong)	2.3911111 102.2060000	T 1-1
MR302	3	61	25.8	Jalan Alor Gajah - Tampin	2.3890556 102.2193611	T 1-1
MR303	3	M8	34.3	Alor Gajah - Machap	2.3729167 102.2263611	T 1-1
MR304	3	M2	20.9	Durian Tunggal - Simpang Gading - Kesang Pajak	2.3253889 102.3360833	T 1-1
MR305	3	M2	17.7	Durian Tunggal - Simpang Gading	2.3181389 102.3606389	T 1-1
MR306	3	M17	25.8	Durian Tunggal - Alor Gajah	2.3617778 102.2281389	T 1-1
MR307	3	M17	27.4	Durian Tunggal - Alor Gajah	2.3776944 102.2211111	T 1-1
MR308	3	19	22.5	Lebu AMJ (Melaka - Alor Gajah)	2.3656667 102.2077778	K 2-2
MR309	3	5	27.4	Melaka - Masjid Tanah	2.3396389 102.1167778	T 1-1
MR310	3	M157	30.6	Masjid Tanah - Pengkalan Balak	2.3486111 102.0946389	T 1-1
MR311	3	139	33.8	Jalan Masjid Tanah - Lendu - Alor Gajah	2.3519722 102.1225556	T 1-1
MR312	3	5	30.6	Jalan Melaka - Masjid Tanah - Lubok China	2.3625556 102.0961944	T 1-1
MR313	3	5	43.5	Jalan Melaka - Masjid Tanah - Lubok China	2.4534722 102.0699722	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Melaka

APRIL 2016

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	Busses	Motorcycles	Total
MR101	-	14,500	1,284	1400-1500	62.9	11.0	1.1	0.1	0.6	24.3	100.0
MR102	-	14,500	2,492	1400-1500	70.7	3.5	2.0	0.3	0.4	23.2	100.0
MR103	-	53,583	6,283	0700-0800	67.2	10.1	5.8	1.3	0.3	15.3	100.0
MR104	-	105,718	8,899	1800-1900	72.4	7.2	2.8	0.4	0.4	16.8	100.0
MR105	-	34,512	3,858	0700-0800	64.1	13.2	4.0	0.7	1.3	16.8	100.0
MR106	-	35,280	4,751	0700-0800	61.3	15.1	2.2	0.2	0.2	21.0	100.0
MR107	-	12,785	1,707	0700-0800	60.6	12.8	3.4	0.3	0.5	22.3	100.0
MR108	-	21,202	2,336	1800-1900	55.9	10.9	3.2	0.3	0.4	29.2	100.0
MR109	-	10,033	978	0900-1000	58.6	12.3	2.0	0.4	0.2	26.6	100.0
MR110	-	49,993	3,817	1800-1900	76.3	3.9	2.6	0.5	0.6	16.0	100.0

District : JASIN

MR201	-	2,828	325	0700-0800	43.2	3.6	13.8	10.3	0.2	29.0	100.0
MR202	-	5,853	642	0700-0800	59.2	3.5	4.3	0.5	0.5	31.9	100.0
MR203	-	6,755	559	0700-0800	58.2	2.9	10.0	2.7	0.4	25.7	100.0
MR204	-	7,984	934	0700-0800	59.7	3.2	4.2	1.0	0.9	31.1	100.0
MR205	-	5,053	450	1400-1500	60.0	4.6	1.6	0.7	0.6	32.5	100.0
MR206	18,296	15,769	1,400	0700-0800	55.1	5.7	2.9	0.9	0.7	34.8	100.0
MR207	-	16,813	1,264	1600-1700	66.2	3.6	1.1	0.8	1.0	27.3	100.0
MR208	-	5,610	573	1800-1900	50.1	4.4	2.6	0.9	0.5	41.5	100.0
MR209	25,054	22,605	2,025	0700-0800	62.5	10.9	5.0	0.7	0.3	20.5	100.0

District : ALOR GAJAH

MR301	21,015	19,243	2,239	0700-0800	57.2	3.9	3.0	0.9	0.9	34.0	100.0
MR302	-	14,519	1,558	0700-0800	58.6	9.9	3.7	0.8	0.6	26.5	100.0
MR303	-	18,791	1,894	0700-0800	57.0	8.8	4.3	1.4	0.3	28.2	100.0
MR304	-	3,527	567	0700-0800	52.8	4.6	9.3	2.6	0.1	30.6	100.0
MR305	-	7,092	646	1600-1700	47.9	6.7	8.0	1.6	0.7	35.2	100.0
MR306	-	12,231	1,827	0700-0800	58.4	8.9	6.4	1.6	0.5	24.2	100.0
MR307	-	16,516	1,693	0700-0800	55.6	8.7	5.8	1.1	0.5	28.2	100.0
MR308	-	18,240	2,100	0700-0800	53.9	8.7	3.0	1.0	0.9	32.4	100.0
MR309	-	21,212	2,212	0700-0800	64.5	6.4	3.6	0.6	0.5	24.4	100.0
MR310	-	17,974	1,867	1200-1300	59.4	5.5	2.4	0.4	0.4	31.9	100.0
MR311	-	11,729	1,140	1800-1900	73.8	7.4	4.3	0.8	0.6	13.2	100.0
MR312	-	18,383	1,661	0700-0800	63.0	6.0	2.9	0.7	0.8	26.6	100.0
MR313	-	7,699	833	0700-0800	52.6	6.0	3.9	1.6	0.4	35.6	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Melaka

OCTOBER 2016

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	Busses	Motorcycles	Total
MR101	-	13,908	1,366	1700-1800	60.1	13.6	0.9	0.2	0.6	24.7	100.0
MR102	-	28,415	2,582	1300-1400	73.8	3.6	2.2	0.3	0.4	19.7	100.0
MR103	-	49,756	4,051	0800-0900	63.7	13.9	6.5	2.0	0.3	13.6	100.0
MR104	-	113,281	9,438	1700-1800	70.2	7.7	2.6	0.5	0.4	18.6	100.0
MR105	-	42,412	3,910	1800-1900	58.7	17.1	4.0	0.8	1.2	18.3	100.0
MR106	-	48,047	5,216	0700-0800	63.4	16.0	1.7	0.1	0.2	18.6	100.0
MR107	-	13,431	1,510	0700-0800	64.6	12.8	3.1	0.5	0.4	18.6	100.0
MR108	-	22,062	2,187	0700-0800	58.3	12.1	2.3	0.2	0.3	26.7	100.0
MR109	-	12,084	1,091	1800-1900	61.9	12.5	2.0	0.5	0.3	22.8	100.0
MR110	-	56,661	5,082	0700-0800	74.5	7.1	3.5	0.7	0.6	13.5	100.0

District : JASIN

MR201	-	2,871	350	0700-0800	45.3	4.7	13.9	8.8	0.1	27.1	100.0
MR202	-	4,656	543	0700-0800	57.5	4.0	3.7	0.9	0.7	33.2	100.0
MR203	-	5,198	445	0700-0800	60.4	5.0	9.0	2.5	0.5	22.7	100.0
MR204	-	8,845	832	1700-1800	57.8	2.8	4.7	1.6	0.6	32.5	100.0
MR205	-	3,435	373	1400-1500	50.7	6.4	3.4	0.5	0.6	38.4	100.0
MR206	17,395	15,511	1,327	1700-1800	55.3	6.0	3.0	1.0	0.5	34.2	100.0
MR207	-	10,730	1,332	0700-0800	56.1	3.2	2.9	0.9	0.7	36.1	100.0
MR208	-	5,497	715	0700-0800	51.6	3.9	3.0	0.6	0.5	40.4	100.0
MR209	25,349	23,049	2,095	0700-0800	63.3	9.1	4.8	1.1	0.3	21.4	100.0

District : ALOR GAJAH

MR301	21,440	20,080	1,787	0700-0800	54.4	4.8	3.3	0.7	0.7	36.0	100.0
MR302	-	15,804	1,270	1800-1900	57.3	13.7	4.5	0.4	0.7	23.3	100.0
MR303	-	19,119	1,947	0700-0800	58.5	9.1	4.1	1.4	0.3	26.7	100.0
MR304	-	3,260	392	1700-1800	52.6	9.0	12.2	2.5	0.3	23.4	100.0
MR305	-	10,022	1,187	1900-2000	48.3	12.1	12.6	2.6	0.4	24.0	100.0
MR306	-	12,563	1,672	0700-0800	57.9	6.4	8.7	1.9	0.6	24.5	100.0
MR307	-	16,122	1,666	0700-0800	56.9	6.5	5.7	1.4	0.5	28.9	100.0
MR308	-	12,984	1,154	1100-1200	56.7	10.1	1.7	0.2	1.3	30.1	100.0
MR309	-	18,262	1,725	1800-1900	62.0	6.3	4.4	1.0	0.6	25.7	100.0
MR310	-	15,204	1,781	1200-1300	57.9	6.4	2.8	0.7	0.3	31.9	100.0
MR311	-	11,750	1,361	1800-1900	61.8	7.5	4.7	1.8	0.6	23.6	100.0
MR312	-	16,495	1,901	0700-0800	59.8	5.7	3.9	1.0	0.8	28.8	100.0
MR313	-	8,631	786	1300-1400	52.5	4.1	4.8	1.6	0.4	36.6	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Melaka

AVERAGE 2016

District : MELAKA TENGAH

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
MR101	14,204	1,325	61.5	12.3	1.0	0.1	0.6	24.5	100%	C	2032
MR102	21,457	2,537	72.2	3.5	2.1	0.3	0.4	21.5	100%	F	R
MR103	51,670	5,167	65.4	12.0	6.1	1.6	0.3	14.4	100%	F	R
MR104	109,500	9,168	71.3	7.5	2.7	0.5	0.4	17.7	100%	F	R
MR105	38,462	3,884	61.4	15.1	4.0	0.7	1.2	17.6	100%	D	2020
MR106	41,664	4,984	62.4	15.6	1.9	0.2	0.2	19.8	100%	E	2018
MR107	13,108	1,609	62.6	12.8	3.2	0.4	0.5	20.5	100%	E	2019
MR108	21,632	2,262	57.1	11.5	2.8	0.3	0.4	28.0	100%	F	R
MR109	11,059	1,035	60.2	12.4	2.0	0.5	0.2	24.7	100%	A	2051
MR110	53,327	4,449	75.4	5.5	3.1	0.6	0.6	14.8	100%	A	-

District : JASIN

MR201	2,850	338	44.3	4.2	13.9	9.5	0.2	28.0	100%	A	-
MR202	5,255	593	58.4	3.7	4.0	0.7	0.6	32.6	100%	A	-
MR203	5,977	502	59.3	3.9	9.5	2.6	0.4	24.2	100%	A	-
MR204	8,415	883	58.8	3.0	4.5	1.3	0.8	31.8	100%	A	-
MR205	4,244	412	55.3	5.5	2.5	0.6	0.6	35.5	100%	A	2056
MR206	15,640	1,364	55.2	5.8	2.9	0.9	0.6	34.5	100%	A	2068
MR207	13,772	1,298	61.2	3.4	2.0	0.9	0.9	31.7	100%	A	-
MR208	5,554	644	50.8	4.2	2.8	0.7	0.5	40.9	100%	A	2036
MR209	22,827	2,060	62.9	10.0	4.9	0.9	0.3	20.9	100%	E	2017

District : ALOR GAJAH

MR301	19,662	2,013	55.8	4.3	3.2	0.8	0.8	35.0	100%	D	2018
MR302	15,162	1,414	57.9	11.8	4.1	0.6	0.7	24.9	100%	C	2025
MR303	18,955	1,921	57.7	8.9	4.2	1.4	0.3	27.4	100%	D	2018
MR304	3,394	480	52.7	6.8	10.7	2.6	0.2	27.0	100%	A	2040
MR305	8,557	917	48.1	9.4	10.3	2.1	0.6	29.6	100%	A	2090
MR306	12,397	1,750	58.2	7.7	7.6	1.7	0.5	24.3	100%	D	2021
MR307	16,319	1,680	56.3	7.6	5.8	1.3	0.5	28.6	100%	C	2024
MR308	15,612	1,627	55.3	9.4	2.3	0.6	1.1	31.3	100%	A	-
MR309	19,737	1,969	63.2	6.3	4.0	0.8	0.6	25.1	100%	D	2026
MR310	16,589	1,824	58.7	5.9	2.6	0.5	0.4	31.9	100%	E	2017
MR311	11,740	1,251	67.8	7.5	4.5	1.3	0.6	18.4	100%	A	2033
MR312	17,439	1,781	61.4	5.9	3.4	0.8	0.8	27.7	100%	E	2022
MR313	8,165	810	52.5	5.0	4.3	1.6	0.4	36.1	100%	A	2064

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Melaka

District : MELAKA TENGAH

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
MR101	13,747	12,959	13,324	13,263	14,820	15,908	16,436	14,480	17,926	14,204	2.2	0.41
MR102	21,041	21,348	25,440	25,536	25,430	22,884	30,915	36,495	37,017	21,457	3.8	0.30
MR103	33,637	36,035	36,079	39,634	37,335	44,607	43,876	51,397	59,399	51,670	5.8	0.88
MR104	70,873	79,525	83,893	93,299	96,793	96,894	92,695	98,086	107,617	109,500	4.1	0.86
MR105	31,197	27,531	25,053	31,681	35,593	34,499	36,848	40,502	39,243	38,462	4.4	0.70
MR106	37,557	36,517	36,020	35,818	39,464	41,988	42,982	47,661	43,702	41,664	2.6	0.64
MR107	9,083	9,340	9,130	7,579	10,199	11,133	10,888	13,136	12,673	13,108	5.1	0.72
MR108	22,917	18,224	18,925	19,298	19,723	21,897	19,909	24,130	22,430	21,632	1.4	0.21
MR109	9,754	8,880	8,882	10,415	11,968	11,174	10,111	11,317	10,336	11,059	2.0	0.35
MR110	68,913	82,706	87,224	81,156	45,710	84,604	87,011	69,786	48,764	53,327	-3.8	0.21

District : JASIN

MR201	3,585	7,681	3,549	3,260	3,081	2,748	3,091	3,242	2,793	2,850	-6.0	0.37
MR202	5,067	5,499	5,293	3,933	5,187	4,946	5,268	5,701	3,914	5,255	-0.5	0.01
MR203	7,992	8,304	8,047	7,672	8,088	6,760	8,257	7,822	5,219	5,977	-3.6	0.48
MR204	12,859	9,206	10,637	10,139	9,958	8,723	9,836	10,337	8,498	8,415	-2.9	0.47
MR205	4,360	3,784	5,674	3,819	4,922	4,818	4,833	5,477	10,186	4,244	4.4	0.22
MR206	19,090	14,057	15,501	15,679	16,426	17,044	16,779	17,112	17,182	15,640	0.2	0.01
MR207	12,057	11,066	15,120	12,735	13,703	15,204	10,377	12,579	11,281	13,772	-0.1	0.00
MR208	3,502	3,822	5,385	4,574	5,511	4,691	6,539	7,386	6,756	5,554	6.4	0.64
MR209	15,208	15,928	16,672	16,113	18,495	20,079	20,578	21,005	22,178	22,827	4.8	0.95

District : ALOR GAJAH

MR301	10,761	11,057	9,986	11,472	11,465	11,170	15,715	15,665	16,885	19,662	7.0	0.82
MR302	11,395	12,779	13,613	13,817	12,885	12,949	14,712	14,800	19,349	15,162	3.7	0.62
MR303	11,586	6,622	11,743	10,734	13,780	13,566	18,595	18,689	20,287	18,955	9.8	0.73
MR304	2,060	1,894	1,939	2,421	1,981	2,060	2,158	2,541	2,690	3,394	4.8	0.64
MR305	9,463	7,691	8,339	8,544	8,123	8,956	9,394	9,216	8,655	8,557	0.5	0.05
MR306	9,773	9,331	9,620	10,456	10,387	11,237	12,433	11,790	12,970	12,397	3.7	0.88
MR307	12,160	12,085	12,514	13,184	13,117	13,487	14,868	14,933	14,896	16,319	3.3	0.94
MR308	16,299	15,980	14,565	14,284	14,184	16,009	14,974	14,140	15,686	15,612	-0.2	0.02
MR309	17,321	17,782	18,420	19,111	18,400	20,074	19,802	18,986	21,167	19,737	1.7	0.69
MR310	10,269	9,436	12,243	13,868	13,687	14,472	14,115	14,821	16,614	16,589	5.7	0.84
MR311	8,716	9,204	9,975	11,708	11,268	12,676	11,183	13,522	11,579	11,740	3.5	0.60
MR312	15,281	16,569	15,481	12,140	14,922	16,322	16,602	10,867	16,916	17,439	0.4	0.01
MR313	8,730	8,179	7,709	7,858	8,084	8,480	9,097	9,013	11,202	8,165	1.7	0.24

STATISTIC FOR YEAR 2016

State : Melaka

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

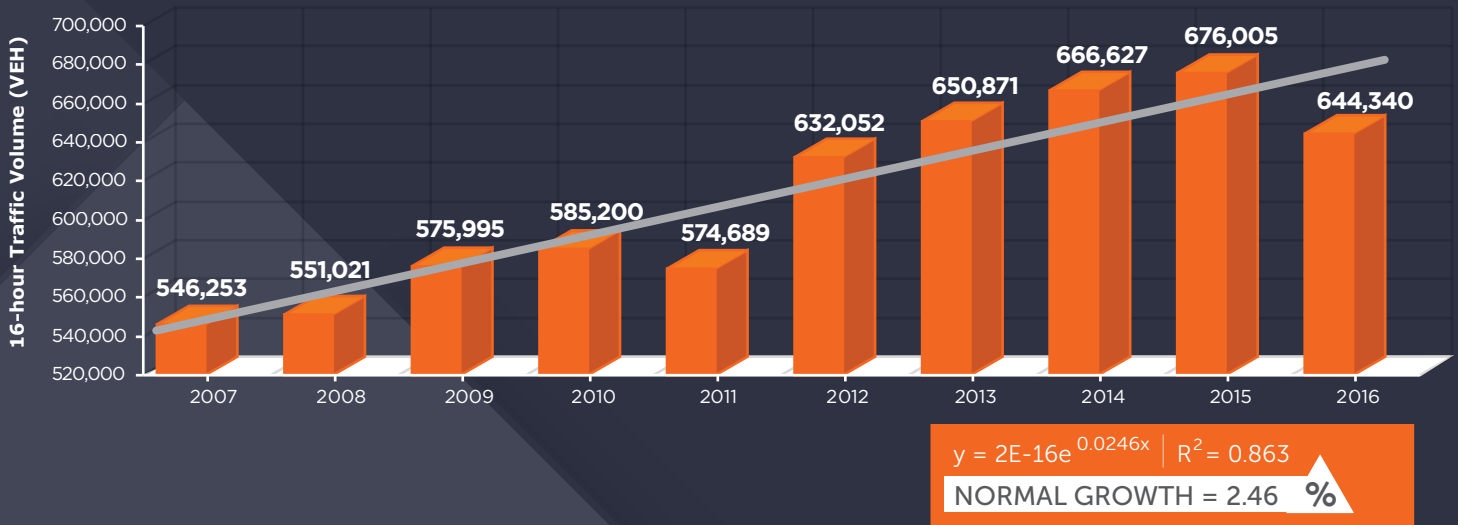


Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Melaka



The state of Melaka consists of 32 census stations. The gradual increase is displayed on the 16-hour traffic volume since the year 2007 until the year 2015, excluding years 2011 and 2016 which show a slight reduction of traffic volume. For the year 2016, it exhibited a decline of 4.68% vehicles compared to the year 2015.

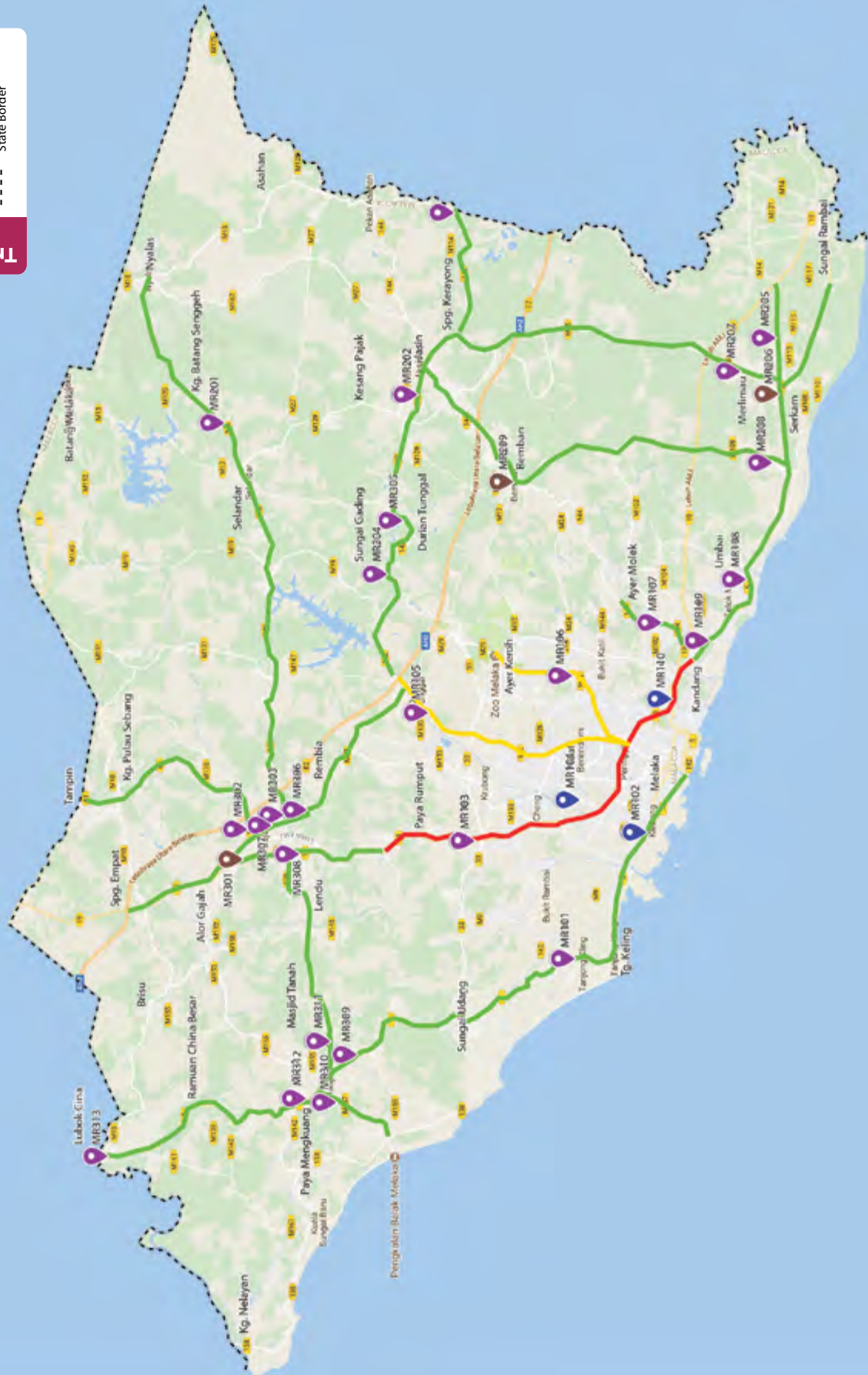
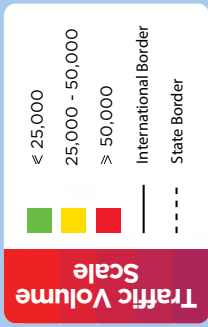


4.68%
Decrease

For the year 2016, the observed traffic growth rate for the state of Melaka is 2.46%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Melaka.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Melaka





JOHOR

Lebu AMJ Road (FT019)

- Tangkak District Border – State of Melaka
 - 2006
- Alternative federal roads connect Tangkak region with Melaka.
 - 23632.98 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

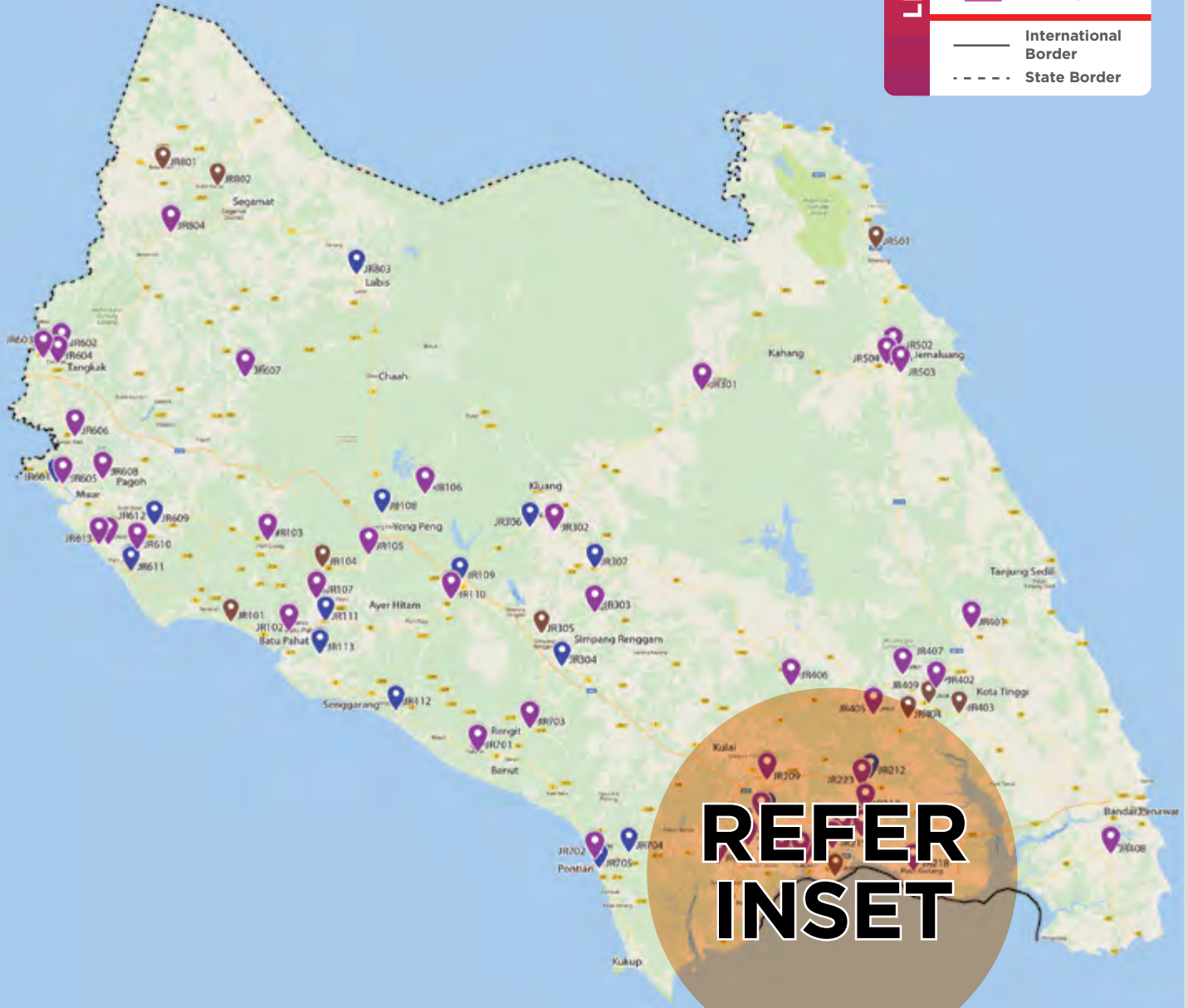
State : Johor

LEGEND

CENSUS STATIONS TYPE

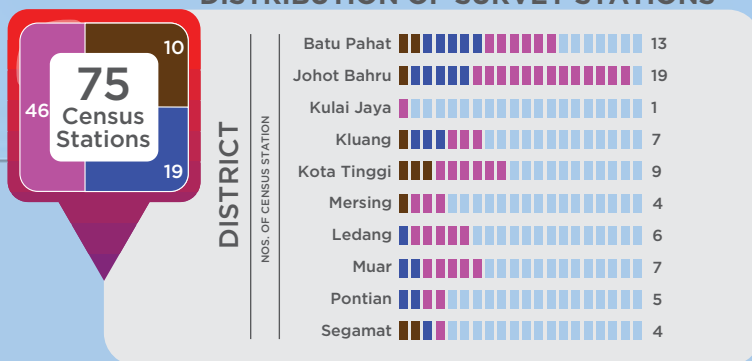
- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



REFER
INSET

DISTRIBUTION OF SURVEY STATIONS



TRAFFIC CENSUS STATION MAP

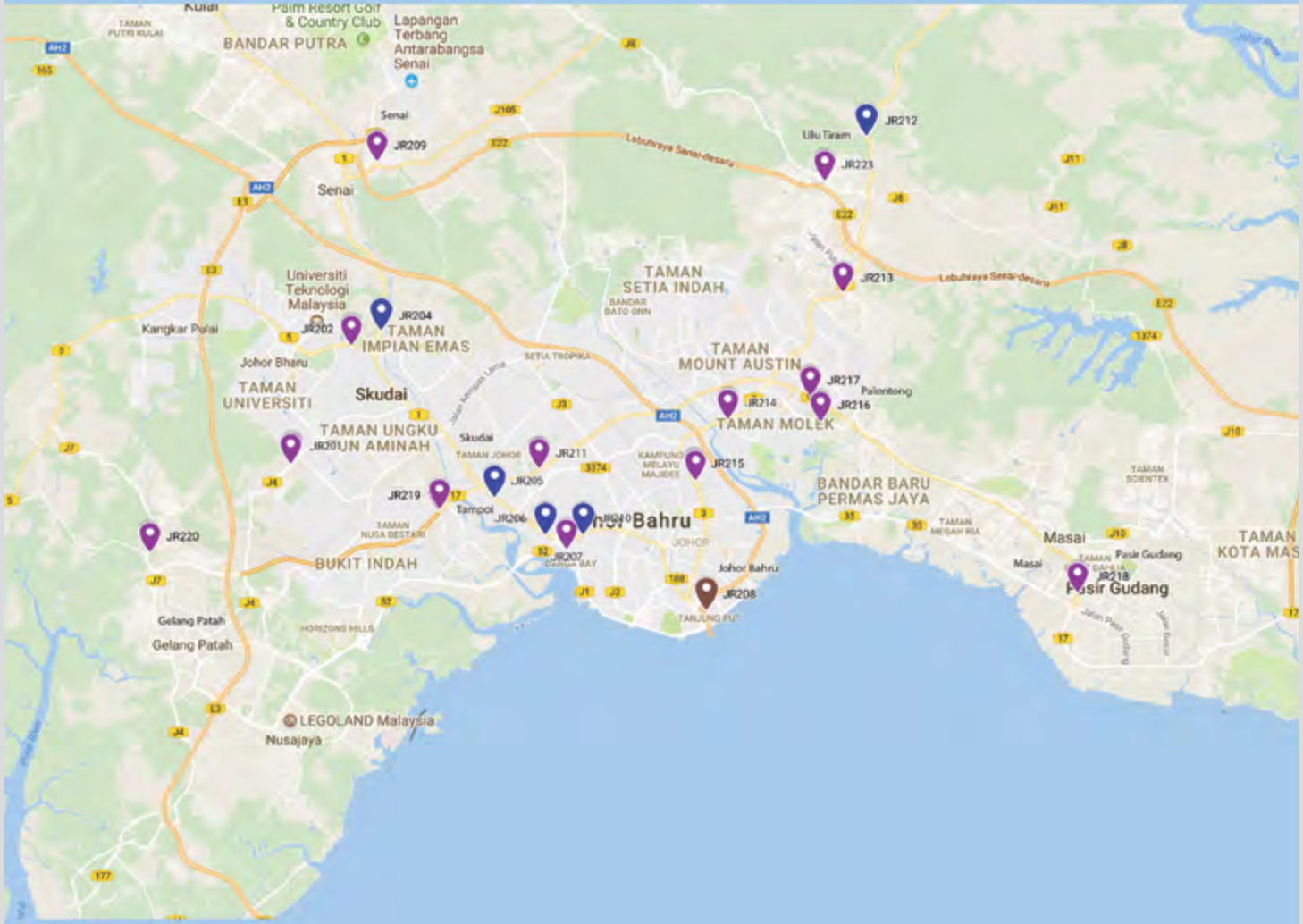
State : Johor

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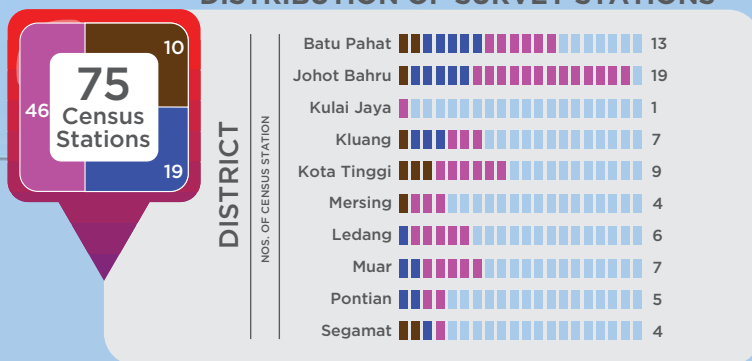
CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Johor

District : BATU PAHAT

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)	Type of Carriageway
JR101	0	5	142.0	Batu Pahat - Muar (Seri Pengkalan)	1.8638500 102.8153500	T 1-1
JR102	3	5	127.5	Batu Pahat - Muar (Peserai)	1.8492220 102.9049170	T 1-1
JR103	3	J128	68.0	Jalan Kangkar Senangar	1.9913330 102.8726390	T 1-1
JR104	0	24	127.2	Muar - Yong Peng (Southeast of J13 junction)	1.9489167 102.9605833	K 2-2
JR105	3	24	115.6	Muar - Yong Peng (3.8km South of Yong Peng (U) Interchange)	1.9725833 103.0333611	T 1-1
JR106	3	J16	122.4	Yong Peng - Kangkar Baru	2.0625833 103.1209167	T 1-1
JR107	3	J13	7.2	Jalan Tongkang Pechah	1.8995000 102.9487500	T 1-1
JR108	1	1	115.0	Yong Peng - Segamat (North of Route 184 junction)	2.0363120 103.0546030	T 1-1
JR109	1	1	96.0	Ayer Hitam - Yong Peng (1km Northwest of Route 50 junction)	1.9265390 103.1766670	T 1-1
JR110	3	50	29.5	Batu Pahat - Ayer Hitam (Parit Sonto)	1.8964722 103.1613889	K 2-2
JR111	1	50	5.0	Batu Pahat - Ayer Hitam (near Batu Pahat Mall)	1.8637222 102.9645556	K 2-2
JR112	1	5	111.0	Pontian - Batu Pahat (Senggarang)	1.7272778 103.0742778	T 1-1
JR113	1	5	129.0	Pontian - Batu Pahat	1.8153889 102.9551389	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Johor

District : JOHOR BAHRU

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
JR201	3	J4	22.0	Johor Bahru - Gelang Patah/ Pendas (Lima Kedai)	1.5115556	103.6300278	K 2-2
JR202	3	5	19.0	Johor Bahru - Pontian (140m West of Route 1 junction)	1.5488056	103.6543889	K 2-2
JR204	1	1	20.8	Tambak Johor - Senai (400m North of Route 5 junction)	1.5504444	103.6575000	K 3-3
JR205	1	1	11.0	Tambak Johor - Senai (near Pekan Rabu)	1.5003333	103.6966944	K 3-3
JR206	1	1	6.0	Tambak Johor - Senai (Skudai Kiri)	1.4879167	103.7136111	K 3-3
JR207	3	J1	6.4	Johor Bahru - Skudai (Danga Bay)	1.4828056	103.7208889	K 3-3
JR208	0	1	-	Malaysia/ Singapore Border - Tambak Johor (Causeway)	1.4628611	103.7666944	K 2-2
JR210	1	1	7.0	Tambak Johor - Senai (Jalan Tun Abdul Razak)	1.4876667	103.7258889	K 2-2
JR211	3	17	13.0	Jalan Pelabuhan Pasir Gudang (1km West of Route 1)	1.5095000	103.7113056	K 2-2
JR212	1	3	23.0	Johor Bahru - Endau (Bandar Tiram)	1.6194520	103.8202530	K 2-2
JR213	3	3	16.0	Johor Bahru - Endau (1.8km South of E22 Interchange)	1.5673889	103.8121944	K 3-3
JR214	3	3	10.0	Johor Bahru - Endau (100m East of Kangkar Tebrau junction)	1.5261450	103.7739010	K 3-3
JR215	3	3	8.0	Johor Bahru - Endau (near Maybank Tebrau)	1.5060000	103.7628889	K 3-3
JR216	3	J10	13.1	Johor Bahru - Masai (Jalan Masai Lama)	1.5252840	103.8046950	K 2-2
JR217	3	17	25.0	Jalan Pelabuhan Pasir Gudang (Johor Jaya)	1.5334740	103.8011620	K 3-3
JR218	3	17	35.1	Jalan Pelabuhan Pasir Gudang (Taman Mawar)	1.4685840	103.8902590	K 2-2
JR219	3	17	2.0	Jalan Pelabuhan Pasir Gudang (Johor Bahru - Link Kedua)	1.4955000	103.6783056	K 3-3
JR220	3	J7	3.0	Ulu Choh - Gelang Patah	1.4818889	103.5825000	K 2-2
JR223	3	1375	24.0	Jalan Felde Ulu Tebrau	1.6049480	103.8058530	T 1-1

District : KULAI JAYA

JR209	3	16	2.1	Jalan Lapangan Terbang Sultan Ismail	1.6112490	103.6577780	K 2-2
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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 (WGS84) (Latitude, Longitude)	Type of Carriageway
JR301	3	50	86.8	Kluang - Jemaluang (Kahang)	2.2267930 103.5548350	T 1-1
JR302	3	J25	102.9	Kluang - Renggam	2.0037050 103.3230560	T 2-2
JR303	3	J26	9.7	Renggam - Simpang Renggam	1.8796389 103.3882500	T 1-1
JR304	1	1	71.4	Johor Bahru - Ayer Hitam (1km Southeast of Route 96 junction)	1.7963333 103.3352500	T 1-1
JR305	0	1	77.3	Johor Bahru - Ayer Hitam (5.6km Northwest of Route 96 junction)	1.8445620 103.3036910	T 1-1
JR306	1	50	49.1	Ayer Hitam - Kluang	2.0124510 103.2851730	K 2-2
JR307	1	91	76.0	Kota Tinggi - Kluang	1.9483120 103.3853100	T 1-1

District : KOTA TINGGI

JR401	3	99	57.6	Jalan Lok Heng	1.8521944 103.9802222	T 1-1
JR402	3	3	48.3	Kota Tinggi - Mersing	1.7610000 103.9260000	T 1-1
JR403	0	92	49.9	Kota Tinggi - Sungai Rengit	1.7166940 103.9608330	T 1-1
JR404	0	3	38.6	Johor Bahru - Kota Tinggi	1.7102780 103.8804170	T 1-1
JR405	3	94	54.7	Kota Tinggi - Kulai	1.7142950 103.8257450	T 1-1
JR406	3	93	4.6	Jalan Sungai Sayong	1.7676070 103.6956380	T 1-1
JR407	3	91	7.0	Kota Tinggi - Kluang	1.7794170 103.8691940	T 1-1
JR408	3	89	16.0	Jalan Tanjung Belungkor	1.5002778 104.1975833	T 1-1
JR409	0	3	36.8	Johor Bahru - Kota Tinggi (Bypass)	1.7340560 103.9137500	T 1-1

District : MERSING

JR501	0	3	135.0	Johor Bahru - Endau (2.4km North of Mersing town)	2.4504440 103.8299720	T 1-1
JR502	3	3	114.0	Johor Bahru - Endau (Northeast of Jemaluang)	2.2844722 103.8570556	T 1-1
JR503	3	3	111.0	Johor Bahru - Endau (Southwest of Jemaluang)	2.2680833 103.8543611	T 1-1
JR504	3	50	137.0	Kluang - Jemaluang (0.1km West of Route 3 junction)	2.2686111 103.8529167	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Johor

District : LEDANG

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)	Type of Carriageway
JR601	1	5	189.0	Muar - Melaka	2.0815278 102.5433056	K 2-2
JR602	3	J123	1.0	Tangkak - Bekoh	2.2891290 102.5496090	T 1-1
JR603	3	J21	2.0	Tangkak - Melaka (Jalan Sialang)	2.2796389 102.5204167	T 1-1
JR604	3	23	26.0	Muar - Segamat (Tangkak)	2.2710833 102.5420000	T 1-1
JR605	3	23	3.0	Muar - Segamat (Parit Bunga)	2.0800880 102.5497390	T 1-1
JR606	3	J33	3.0	Sungai Mati - Bukit Gambir	2.1539900 102.5689660	T 1-1

District : MUAR

JR607	3	J32	45.5	Muar - Labis (Lenga)	2.2522680 102.8361520	T 1-1
JR608	3	J32	186.4	Muar - Labis (Bukit Pasir)	2.0901950 102.6173340	T 1-1
JR609	1	24	161.5	Muar - Yong Peng (East of Route J131 junction)	2.0147500 102.6961080	T 1-1
JR610	3	J131	2.8	Parit Jawa - Air Manis	1.9774510 102.6674770	T 1-1
JR611	1	5	170.5	Batu Pahat - Muar (Parit Jamil)	1.9426420 102.6577800	T 1-1
JR612	3	J31	9.2	Jalan Temenggong Ahmad	1.9850833 102.6201389	T 1-1
JR613	3	5	178.5	Batu Pahat - Muar (Parit Haji Ali)	1.9841830 102.6081970	T 1-1

District : PONTIAN

JR701	3	5	87.0	Pontian - Batu Pahat (Tampok)	1.6580833 103.2000000	T 1-1
JR702	3	5	66.5	Pontian - Batu Pahat (near Hospital Pontian)	1.4981389 103.3853333	T 1-1
JR703	3	96	6.0	Simpang Renggam - Benut	1.6961389 103.2850556	T 1-1
JR704	1	5	54.5	Johor Bahru - Pontian Kechil	1.5003611 103.4420556	T 1-1
JR705	1	95	1.0	Johor Bahru - Pontian Kechil - Kukup	1.4749167 103.3944444	T 1-1

District : SEGAMAT

R801	0	1	200.0	Johor Bahru - Segamat - Batu Enam	2.5742500 102.7090278	T 1-1
JR802	0	12	50.0	Lebuhraya Tun Abdul Razak (500m Segamat - Kuantan junction)	2.5487780 102.7935000	T 1-1
JR803	1	1	158.0	Johor Bahru - Segamat(Labis)	2.4114530 103.0146150	T 1-1
JR804	3	23	60.0	Johor Bahru - Segamat (Jementah)	2.4764722 102.7181667	K 2-2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Johor

APRIL 2016

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	Busses	Motorcycles	Total
JR101	15,683	13,006	1,004	2000-2100	64.2	8.0	7.5	1.1	1.2	18.0	100.0
JR102	-	16,698	1,633	1700-1800	61.3	8.2	6.9	2.4	1.1	20.1	100.0
JR103	-	8,563	885	0700-0800	38.4	9.8	11.3	7.5	1.0	31.9	100.0
JR104	20,126	16,690	1,175	1800-1900	40.2	26.7	16.4	7.2	0.4	9.2	100.0
JR105	-	14,538	1,247	0700-0800	57.5	10.4	10.3	8.7	1.0	12.1	100.0
JR106	-	4,252	669	0900-1000	50.6	9.8	3.8	2.0	0.5	33.3	100.0
JR107	-	27,836	2,891	0800-0900	59.6	9.9	7.4	2.8	0.5	19.9	100.0
JR108	-	9,734	719	1700-1800	48.2	17.8	13.0	9.1	1.2	10.8	100.0
JR109	-	11,198	873	1800-1900	55.4	14.1	11.2	7.1	0.4	11.9	100.0
JR110	-	29,253	2,364	1700-1800	59.9	20.7	5.1	0.9	1.2	12.2	100.0
JR111	-	64,413	4,886	1100-1200	57.1	8.7	4.8	2.3	0.5	26.5	100.0
JR112	-	12,077	919	1700-1800	69.0	8.3	6.4	1.7	0.8	13.8	100.0
JR113	-	34,900	2,785	1700-1800	75.3	6.7	3.0	0.8	0.4	13.8	100.0

District : JOHOR BAHRU

JR201	-	38,434	3,564	1800-1900	63.0	4.8	5.2	1.2	1.0	24.8	100.0
JR202	-	123,613	9,934	1800-1900	74.4	8.6	4.3	1.3	0.8	10.7	100.0
JR204	-	113,954	9,022	1800-1900	73.6	8.0	4.6	1.7	1.8	10.4	100.0
JR205	-	183,444	13,329	1900-2000	76.8	3.4	2.4	0.8	1.5	15.2	100.0
JR206	-	155,258	13,569	0700-0800	73.8	3.8	1.7	0.6	1.5	18.6	100.0
JR207	-	73,927	6,593	1700-1800	78.6	4.1	1.9	0.8	1.5	13.2	100.0
JR208	152,105	120,576	11,671	0600-0700	27.1	1.5	1.0	1.4	1.6	67.3	100.0
JR210	-	140,091	10,924	1700-1800	64.2	12.4	1.4	0.5	1.3	20.2	100.0
JR211	-	87,740	7,695	0700-0800	70.9	8.4	5.4	2.7	0.5	12.0	100.0
JR212	-	34,694	3,157	1700-1800	72.9	6.9	4.3	3.5	0.9	11.5	100.0
JR213	-	128,187	11,191	0700-0800	74.7	3.4	5.9	4.3	0.8	10.9	100.0
JR214	-	122,450	12,322	0800-0900	74.8	3.5	2.9	1.5	0.8	16.4	100.0
JR215	-	62,590	5,144	1300-1400	82.4	2.2	1.0	0.6	1.0	12.8	100.0
JR216	-	32,601	3,696	0800-0900	74.7	8.3	2.5	0.8	1.0	12.7	100.0
JR217	-	105,246	8,890	0700-0800	74.6	3.6	4.8	6.3	0.4	10.3	100.0
JR218	-	44,969	4,606	0800-0900	39.6	35.4	5.4	7.6	4.5	7.5	100.0
JR219	-	142,077	12,655	1900-2000	72.3	4.7	2.2	1.1	0.5	19.2	100.0
JR220	-	56,956	5,733	0700-0800	69.2	9.2	4.5	3.4	0.7	13.0	100.0
JR223	-	17,573	2,060	0700-0800	62.9	5.1	5.0	3.8	0.9	22.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Johor

APRIL 2016

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	Busses	Motorcycles	Total
JR209	-	39,129	4,458	0700-0800	69.7	6.3	6.4	3.3	1.5	12.7	100.0

District : KLUANG

JR301	-	5,000	463	1300-1400	41.2	16.0	13.3	12.2	1.3	16.0	100.0
JR302	-	15,244	1,710	0700-0800	57.7	13.7	4.9	1.8	0.8	21.2	100.0
JR303	-	9,951	843	0700-0800	62.6	11.4	7.4	5.4	0.8	12.3	100.0
JR304	-	12,076	874	0700-0800	45.8	12.4	13.1	10.9	0.9	17.0	100.0
JR305	18,612	16,351	1,232	1300-1400	50.9	10.8	9.1	7.0	0.4	21.9	100.0
JR306	-	43,436	3,361	0700-0800	68.2	9.9	5.6	2.6	0.9	12.8	100.0
JR307	-	8,940	663	1700-1800	63.4	9.0	5.4	7.0	0.6	14.7	100.0

District : KOTA TINGGI

JR401	-	6,536	615	1700-1800	59.6	7.0	6.0	5.9	0.5	20.9	100.0
JR402	-	17,282	1,316	1800-1900	64.4	9.9	7.6	7.8	0.8	9.4	100.0
JR403	19,302	17,076	1,498	1800-1900	73.8	6.6	4.4	2.6	0.9	11.8	100.0
JR404	22,557	20,082	1,616	1700-1800	72.2	7.9	5.4	1.8	1.1	11.7	100.0
JR405	-	5,747	583	1700-1800	73.4	8.9	4.8	4.3	0.3	8.4	100.0
JR406	-	7,992	854	1300-1400	54.8	8.5	8.2	12.5	0.7	15.2	100.0
JR407	-	3,949	340	0700-0800	54.3	11.8	8.6	7.8	0.3	17.2	100.0
JR408	-	4,110	357	1700-1800	60.2	9.1	10.1	7.2	0.5	13.0	100.0
JR409	18,672	16,372	1,333	1800-1900	67.6	10.1	7.0	6.7	0.7	7.9	100.0

District : MERSING

JR501	16,685	14,892	1,174	1700-1800	56.9	8.4	4.6	3.0	0.6	26.6	100.0
JR502	-	5,649	456	1700-1800	65.4	10.7	8.4	5.7	1.3	8.5	100.0
JR503	-	5,755	524	1600-1700	65.4	8.1	8.5	7.0	2.0	8.9	100.0
JR504	-	1,135	116	0800-0900	26.3	24.0	15.3	17.4	0.7	16.3	100.0

District : LEDANG

JR601	-	30,179	2,962	1800-1900	66.1	9.5	7.8	1.1	0.6	14.8	100.0
JR602	-	5,132	537	0700-0800	31.4	10.2	8.9	5.2	0.3	43.8	100.0
JR603	-	8,627	737	1600-1700	64.5	9.2	3.1	1.2	0.6	21.3	100.0
JR604	-	16,677	1,724	0700-0800	59.1	8.2	6.4	2.4	0.8	23.1	100.0
JR605	-	26,165	3,396	0700-0800	60.1	9.6	4.6	2.3	0.9	22.5	100.0
JR606	-	13,698	1,457	0700-0800	60.2	11.5	8.0	1.4	0.8	18.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Johor

APRIL 2016

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	Busses	Motorcycles	Total
JR607	-	4,353	378	1300-1400	47.0	13.6	6.4	0.5	0.3	32.1	100.0
JR608	-	17,556	1,353	1800-1900	56.5	12.5	10.4	4.5	1.0	15.0	100.0
JR609	-	6,223	603	1700-1800	51.6	11.4	19.3	5.7	0.4	11.7	100.0
JR610	-	5,519	529	0800-0900	37.1	16.2	23.4	4.4	0.0	19.0	100.0
JR611	-	14,425	1,209	1700-1800	66.7	6.8	7.7	1.2	0.7	17.0	100.0
JR612	-	14,302	1,071	0700-0800	52.0	16.7	10.6	1.3	0.8	18.6	100.0
JR613	-	8,234	638	1700-1800	47.8	18.7	9.8	0.9	0.6	22.2	100.0

District : PONTIAN

JR701	-	12,520	1,094	1100-1200	64.2	8.1	3.7	1.2	1.0	21.8	100.0
JR702	-	17,395	1,453	0700-0800	67.7	8.2	5.0	2.4	0.8	15.9	100.0
JR703	-	7,864	823	0700-0800	58.1	11.4	7.3	4.8	0.8	17.6	100.0
JR704	-	14,049	1,065	1800-1900	64.3	7.3	7.7	4.5	1.1	15.0	100.0
JR705	-	17,777	1,385	1800-1900	69.6	6.6	3.3	1.2	0.5	18.9	100.0

District : SEGAMAT

JR801	19,235	16,848	1,385	1800-1900	55.8	8.6	5.5	3.8	0.6	25.7	100.0
JR802	17,804	15,946	1,274	1100-1200	65.0	14.1	5.7	4.9	0.6	9.6	100.0
JR803	-	12,882	1,026	1700-1800	65.8	11.1	7.8	5.5	1.0	8.8	100.0
JR804	-	7,571	641	0700-0800	54.5	16.7	9.2	6.1	1.7	11.8	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Johor

OCTOBER 2016

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	Busses	Motorcycles	Total
JR101	13,016	12,119	780	1900-2000	60.3	9.8	9.1	1.9	1.6	17.4	100.0
JR102	-	19,655	1,759	1800-1900	59.9	8.4	6.8	2.1	0.9	21.9	100.0
JR103	-	8,303	691	0600-0700	39.8	9.1	12.7	9.4	0.8	28.2	100.0
JR104	18,417	15,887	1,379	1800-1900	40.3	21.6	21.1	7.0	0.4	9.6	100.0
JR105	-	14,569	1,157	1500-1600	59.4	9.3	9.7	8.4	0.7	12.5	100.0
JR106	-	2,505	271	1700-1800	47.6	7.6	4.8	4.3	0.8	34.9	100.0
JR107	-	27,086	2,525	0800-0900	60.5	10.2	7.3	2.6	0.6	18.8	100.0
JR108	-	9,732	747	1700-1800	47.3	17.6	12.6	10.0	1.2	11.3	100.0
JR109	-	11,427	860	1800-1900	49.1	13.2	12.2	7.3	0.5	17.6	100.0
JR110	-	28,043	2,308	0900-1000	71.4	6.3	3.8	1.5	1.0	16.0	100.0
JR111	-	75,784	5,870	0700-0800	59.9	8.7	5.5	2.2	0.5	23.1	100.0
JR112	-	12,905	944	1600-1700	59.5	11.8	9.5	1.4	0.7	17.1	100.0
JR113	-	38,231	2,741	0800-0900	76.4	6.9	3.5	0.4	0.3	12.5	100.0

District : JOHOR BAHRU

JR201	-	50,614	5,867	0600-0700	68.7	3.6	4.8	0.8	0.9	21.1	100.0
JR202	-	131,702	11,009	1700-1800	74.9	6.5	4.3	1.1	0.9	12.3	100.0
JR204	-	107,043	9,502	1700-1800	74.3	7.4	4.7	1.7	1.8	10.1	100.0
JR205	-	184,828	15,095	2100-2200	76.6	2.8	2.3	0.7	1.5	16.1	100.0
JR206	-	153,915	12,719	1800-1900	77.2	4.0	1.6	0.6	1.6	15.0	100.0
JR207	-	99,313	8,066	1700-1800	74.3	6.1	3.6	1.3	1.3	13.4	100.0
JR208	170,485	132,819	13,713	0600-0700	27.5	1.1	0.9	1.2	1.5	67.8	100.0
JR210	-	118,746	9,088	1800-1900	61.2	9.4	2.3	0.7	1.7	24.7	100.0
JR211	-	90,049	7,045	1800-1900	74.9	6.6	4.9	3.0	0.3	10.3	100.0
JR212	-	37,114	2,766	1700-1800	75.4	6.8	4.6	3.7	0.9	8.7	100.0
JR213	-	111,995	9,406	1800-1900	72.6	4.4	5.8	5.0	1.1	20.0	100.0
JR214	-	132,234	13,552	1700-1800	70.6	3.4	3.1	1.8	1.1	83.7	100.0
JR215	-	70,998	7,083	1800-1900	84.6	1.3	0.9	0.2	1.0	12.0	100.0
JR216	-	30,053	2,943	1800-1900	79.7	4.3	2.4	0.6	0.9	12.0	100.0
JR217	-	106,273	9,455	0700-0800	72.0	4.5	5.9	7.5	0.4	9.7	100.0
JR218	-	41,298	8,025	0900-1000	65.1	4.1	6.0	9.9	0.4	14.5	100.0
JR219	-	125,331	9,348	0800-0900	73.0	7.7	4.1	1.7	0.6	13.0	100.0
JR220	-	57,643	4,925	0700-0800	68.2	8.6	4.4	2.9	0.5	15.6	100.0
JR223	-	17,840	1,753	1100-1200	70.4	5.7	5.4	4.3	0.6	13.7	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Johor

OCTOBER 2016

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	Busses	Motorcycles	Total
JR209	-	22,297	2,995	0700-1800	72.7	9.8	3.0	1.4	2.5	10.7	100.0

District : KLUANG

JR301	-	5,498	542	1300-1400	39.8	16.2	11.0	15.3	1.1	16.5	100.0
JR302	-	13,301	1,963	0700-0800	62.3	10.1	4.9	1.5	0.6	20.5	100.0
JR303	-	11,400	1,015	0700-0800	64.9	11.3	8.2	5.2	0.6	9.7	100.0
JR304	-	12,281	1,016	1300-1400	40.4	9.5	16.4	15.1	0.9	17.8	100.0
JR305	21,011	18,845	1,618	1800-1900	48.4	14.9	10.4	8.8	0.6	16.9	100.0
JR306	-	40,435	3,195	1700-1800	69.8	8.9	4.9	2.7	0.9	12.8	100.0
JR307	-	8,755	683	1800-1900	62.3	7.2	6.4	7.6	0.6	15.9	100.0

District : KOTA TINGGI

JR401	-	7,359	747	1700-1800	55.1	6.9	7.6	5.4	0.6	24.3	100.0
JR402	-	15,921	1,484	0700-0800	66.9	5.7	7.8	9.7	0.8	9.0	100.0
JR403	19,539	17,174	1,375	1800-1900	74.3	7.1	4.1	3.3	0.8	10.5	100.0
JR404	20,047	17,885	1,524	1700-1800	69.7	9.5	5.5	2.5	1.3	11.6	100.0
JR405	-	5,585	497	1600-1700	81.4	5.9	2.7	3.2	0.3	6.6	100.0
JR406	-	6,577	838	0700-0800	59.6	7.1	7.5	10.2	0.8	14.7	100.0
JR407	-	4,507	443	1600-1700	61.1	8.3	9.0	5.8	0.6	15.2	100.0
JR408	-	4,431	442	1700-1800	56.2	9.2	9.4	7.9	1.2	16.0	100.0
JR409	20,357	17,747	1,391	0700-0800	68.0	9.1	7.1	6.6	0.8	8.4	100.0

District : MERSING

JR501	17,672	15,779	1,276	1700-1800	58.8	7.4	4.8	3.2	0.6	25.3	100.0
JR502	-	4,794	408	1400-1500	63.5	10.9	8.9	8.6	1.1	7.1	100.0
JR503	-	4,182	368	1700-1800	49.1	22.0	14.0	6.3	1.1	7.6	100.0
JR504	-	756	103	1200-1300	42.2	16.4	6.7	16.0	0.5	18.1	100.0

District : LEDANG

JR601	-	27,439	2,497	1800-1900	69.7	7.4	6.7	1.0	0.6	14.6	100.0
JR602	-	3,470	307	1300-1400	63.7	5.0	7.4	0.7	0.5	22.7	100.0
JR603	-	9,266	935	1800-1900	47.1	11.0	7.6	2.2	0.5	31.6	100.0
JR604	-	15,595	1,545	0800-0900	53.1	13.8	6.9	2.7	1.1	22.4	100.0
JR605	-	33,179	3,225	0700-0800	71.5	3.9	9.0	1.3	0.6	13.6	100.0
JR606	-	15,995	1,638	0700-0800	67.5	4.4	7.4	0.4	0.5	19.8	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Johor

OCTOBER 2016

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	Busses	Motorcycles	Total
JR607	-	2,632	222	1400-1500	43.4	14.3	4.4	1.1	0.6	36.2	100.0
JR608	-	17,319	1,405	0700-0800	52.7	13.4	10.4	4.4	1.1	18.1	100.0
JR609	-	6,341	553	1700-1800	50.2	15.5	16.6	7.0	0.4	10.3	100.0
JR610	-	3,674	331	1400-1500	34.5	14.7	24.1	9.9	0.1	16.6	100.0
JR611	-	14,611	1,141	0700-0800	59.2	10.5	9.1	0.9	0.7	19.5	100.0
JR612	-	13,363	1,638	0700-0800	67.5	4.4	7.4	0.4	0.5	19.8	100.0
JR613	-	15,995	1,638	0700-0800	67.5	4.4	7.4	0.4	0.5	19.8	100.0

District : PONTIAN

JR701	-	11,558	1,078	1700-1800	65.9	5.1	4.3	0.8	0.8	23.0	100.0
JR702	-	15,984	1,652	0700-0800	65.9	6.2	5.5	2.8	0.7	18.9	100.0
JR703	-	7,424	641	0700-0800	55.6	6.5	7.4	2.8	8.3	19.4	100.0
JR704	-	14,911	1,087	1300-1400	70.3	8.4	6.0	2.8	1.2	11.4	100.0
JR705	-	17,747	1,503	1700-1800	69.2	5.0	5.0	0.9	0.5	19.5	100.0

District : SEGAMAT

JR801	17,294	15,059	1,277	1800-1900	54.4	9.9	5.7	5.2	0.6	24.1	100.0
JR802	14,306	12,897	1,142	1700-1800	58.5	17.0	7.1	5.3	0.7	11.4	100.0
JR803	-	13,337	1,116	1700-1800	64.9	10.2	8.9	6.2	1.0	8.8	100.0
JR804	-	8,107	862	1400-1500	57.7	13.6	9.3	5.6	1.9	11.9	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Johor

AVERAGE 2016

District : BATU PAHAT

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
JR101	12,562	892	62.2	8.9	8.3	1.5	1.4	17.7	100%	A	2044
JR102	18,177	1,696	60.6	8.3	6.9	2.2	1.0	21.0	100%	E	-
JR103	8,433	788	39.1	9.4	12.0	8.5	0.9	30.1	100%	A	2062
JR104	16,289	1,277	40.3	24.1	18.7	7.1	0.4	9.4	100%	A	2113
JR105	14,554	1,202	58.4	9.9	10.0	8.5	0.9	12.3	100%	C	2047
JR106	3,379	470	49.1	8.7	4.3	3.2	0.6	34.1	100%	A	-
JR107	27,461	2,708	60.1	10.0	7.3	2.7	0.6	19.4	100%	F	R
JR108	9,733	733	47.7	17.7	12.8	9.5	1.2	11.1	100%	A	-
JR109	11,312	866	52.2	13.6	11.7	7.2	0.5	14.8	100%	A	2044
JR110	28,648	2,336	65.7	13.5	4.4	1.2	1.1	14.1	100%	A	2041
JR111	70,098	5,378	58.5	8.7	5.2	2.3	0.5	24.8	100%	D	2019
JR112	12,491	932	64.2	10.1	8.0	1.5	0.8	15.5	100%	A	-
JR113	36,566	2,763	75.9	6.8	3.3	0.6	0.4	13.1	100%	A	2029

District : JOHOR BAHRU

JR201	44,524	4,716	65.9	4.2	5.0	1.0	1.0	23.0	100%	E	2017
JR202	127,658	10,472	74.6	7.6	4.3	1.2	0.9	11.5	100%	F	R
JR204	110,498	9,262	74.0	7.7	4.6	1.7	1.8	10.3	100%	F	R
JR205	184,136	14,212	76.7	3.1	2.3	0.7	1.5	15.7	100%	F	R
JR206	154,587	13,144	75.5	3.9	1.6	0.6	1.6	16.8	100%	F	R
JR207	86,620	7,330	76.4	5.1	2.8	1.0	1.4	13.3	100%	D	2019
JR208	126,698	12,692	27.3	1.3	1.0	1.3	1.6	67.5	100%	F	R
JR210	129,419	10,006	62.7	10.9	1.8	0.6	1.5	22.5	100%	F	R
JR211	88,895	7,370	72.9	7.5	5.1	2.9	0.4	11.1	100%	F	R
JR212	35,904	2,962	74.1	6.8	4.4	3.6	0.9	10.1	100%	B	-
JR213	120,091	10,299	73.6	3.9	5.9	4.7	0.9	15.4	100%	F	R
JR214	127,342	12,937	72.7	3.5	3.0	1.6	0.9	50.0	100%	F	R
JR215	66,794	6,114	83.5	1.8	0.9	0.4	1.0	12.4	100%	B	-
JR216	31,327	3,320	77.2	6.3	2.5	0.7	1.0	12.4	100%	B	-
JR217	105,760	9,173	73.3	4.1	5.3	6.9	0.4	10.0	100%	F	R
JR218	43,134	6,316	52.4	19.7	5.7	8.7	2.5	11.0	100%	F	R
JR219	133,704	11,002	72.6	6.2	3.1	1.4	0.5	16.1	100%	F	R
JR220	57,300	5,329	68.7	8.9	4.4	3.1	0.6	14.3	100%	F	R
JR223	17,707	1,907	66.6	5.4	5.2	4.1	0.7	18.0	100%	F	R

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Johor

AVERAGE 2016

District : KULAI JAYA

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
JR209	30,713	3,727	71.2	8.1	4.7	2.4	2.0	11.7	100%	C	2022

District : KLUANG

JR301	5,249	503	40.5	16.1	12.2	13.7	1.2	16.3	100%	A	2062
JR302	14,273	1,837	60.0	11.9	4.9	1.6	0.7	20.9	100%	F	R
JR303	10,676	929	63.7	11.4	7.8	5.3	0.7	11.0	100%	A	-
JR304	12,179	945	43.1	10.9	14.7	13.0	0.9	17.4	100%	C	2023
JR305	17,598	1,425	49.6	12.9	9.7	7.9	0.5	19.4	100%	E	2019
JR306	41,936	3,278	69.0	9.4	5.2	2.7	0.9	12.8	100%	B	2030
JR307	8,848	673	62.8	8.1	5.9	7.3	0.6	15.3	100%	A	2037

District : KOTA TINGGI

JR401	6,948	1,289	62.1	6.1	5.1	3.4	0.4	22.9	100%	C	-
JR402	16,602	1,400	65.7	7.8	7.7	8.8	0.8	9.2	100%	F	R
JR403	17,125	1,437	74.0	6.8	4.2	3.0	0.8	11.2	100%	C	2033
JR404	18,984	1,570	70.9	8.7	5.4	2.1	1.2	11.7	100%	D	2032
JR405	5,666	540	77.4	7.4	3.7	3.8	0.3	7.5	100%	A	-
JR406	7,285	846	57.2	7.8	7.9	11.4	0.7	15.0	100%	A	-
JR407	4,228	392	57.7	10.1	8.8	6.8	0.4	16.2	100%	A	-
JR408	4,271	400	58.2	9.1	9.8	7.5	0.8	14.5	100%	A	2099
JR409	17,060	1,362	67.8	9.6	7.0	6.7	0.8	8.2	100%	D	2032

District : MERSING

JR501	15,336	1,225	57.8	7.9	4.7	3.1	0.6	26.0	100%	A	-
JR502	5,222	432	64.4	10.8	8.7	7.1	1.2	7.8	100%	A	2075
JR503	4,969	446	57.2	15.0	11.3	6.7	1.5	8.3	100%	A	-
JR504	946	110	34.2	20.2	11.0	16.7	0.6	17.2	100%	A	2070

District : LEDANG

JR601	28,809	2,730	67.9	8.4	7.3	1.1	0.6	14.7	100%	A	2036
JR602	4,301	422	47.6	7.6	8.1	3.0	0.4	33.3	100%	A	-
JR603	8,947	836	55.8	10.1	5.3	1.7	0.6	26.5	100%	A	2047
JR604	16,136	1,635	56.1	11.0	6.7	2.5	1.0	22.7	100%	F	R
JR605	29,672	3,311	65.8	6.8	6.8	1.8	0.8	18.1	100%	F	R
JR606	14,847	1,548	63.9	7.9	7.7	0.9	0.7	19.0	100%	E	2017

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Johor

AVERAGE 2016

District : MUAR

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
JR607	3,493	300	45.2	14.0	5.4	0.8	0.5	34.1	100%	A	-
JR608	17,438	1,379	54.6	12.9	10.4	4.5	1.1	16.6	100%	E	-
JR609	6,282	578	50.9	13.4	17.9	6.3	0.4	11.0	100%	A	-
JR610	4,597	430	35.8	15.4	23.7	7.1	0.0	17.8	100%	A	2031
JR611	14,518	1,175	62.9	8.6	8.4	1.0	0.7	18.3	100%	C	2022
JR612	13,833	1,355	59.8	10.5	9.0	0.9	0.7	19.2	100%	D	2025
JR613	12,115	1,138	57.7	11.5	8.6	0.7	0.6	21.0	100%	B	2023

District : PONTIAN

JR701	12,039	1,086	65.1	6.6	4.0	1.0	0.9	22.4	100%	B	2032
JR702	16,690	1,553	66.8	7.2	5.2	2.6	0.7	17.4	100%	E	2024
JR703	7,644	732	56.9	9.0	7.3	3.8	4.6	18.5	100%	A	2033
JR704	14,480	1,076	67.3	7.9	6.9	3.7	1.1	13.2	100%	C	-
JR705	17,762	1,444	69.4	5.8	4.1	1.0	0.5	19.2	100%	D	-

District : SEGAMAT

JR801	15,954	1,331	55.1	9.3	5.6	4.5	0.6	24.9	100%	C	2028
JR802	14,421	1,208	61.8	15.6	6.4	5.1	0.6	10.5	100%	D	2025
JR803	13,110	1,071	65.3	10.6	8.3	5.8	1.0	8.8	100%	B	2040
JR804	7,839	752	56.1	15.2	9.2	5.9	1.8	11.8	100%	A	2173

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Johor

District : BATU PAHAT

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
JR101	11,727	10,736	12,735	11,162	11,711	14,847	18,659	15,491	12,321	12,562	2.6	0.22
JR102	21,432	19,665	21,195	20,237	15,020	21,881	25,305	21,429	17,176	18,177	-0.8	0.03
JR103	8,239	5,509	8,649	6,539	15,428	7,866	8,531	7,183	8,032	8,433	1.2	0.02
JR104	24,014	32,094	33,381	25,916	40,092	23,361	34,672	32,757	25,310	16,289	-3.0	0.12
JR105	13,494	14,764	15,369	14,770	15,230	15,993	16,189	14,695	16,282	14,554	0.9	0.22
JR106	3,389	3,266	3,133	3,144	3,666	4,035	4,419	3,561	2,495	3,379	-0.1	0.00
JR107	24,457	27,620	22,105	24,961	28,189	29,330	30,117	27,119	24,410	27,461	1.1	0.12
JR108	12,263	12,557	12,869	12,262	13,025	12,369	11,628	11,521	11,985	9,733	-1.9	0.49
JR109	9,112	9,686	9,646	9,722	9,418	10,184	10,507	10,339	10,618	11,312	2.0	0.84
JR110	19,864	22,271	22,282	22,463	24,236	25,758	25,816	23,090	27,763	28,648	3.3	0.79
JR111	59,993	40,929	48,391	68,097	47,852	74,604	71,408	62,409	66,123	70,098	4.0	0.36
JR112	13,768	13,508	13,803	34,077	13,505	12,996	12,921	12,867	11,390	12,491	-3.3	0.10
JR113	24,219	24,710	27,870	30,932	33,455	33,260	34,935	42,064	41,264	36,566	5.9	0.86

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Johor

District : JOHOR BAHRU

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
JR201	21,682	21,466	24,684	36,243	32,527	35,398	40,123	37,859	34,273	44,524	7.4	0.76
JR202	67,190	78,069	91,544	100,402	96,248	126,786	126,934	126,242	115,530	127,658	6.7	0.80
JR204	115,506	97,582	99,254	101,856	107,591	104,684	114,704	105,441	108,858	110,498	0.6	0.10
JR205	187,687	154,952	218,035	221,084	213,390	162,454	189,292	191,427	178,012	184,136	-0.4	0.01
JR206	183,682	172,548	189,659	181,637	167,933	171,102	168,344	159,157	122,004	154,587	-3.1	0.55
JR207	59,563	42,635	62,177	59,676	75,358	78,405	98,298	81,724	84,064	86,620	6.7	0.68
JR208	122,851	128,068	141,198	161,424	217,277	157,555	137,107	115,133	112,822	126,698	-1.5	0.05
JR210	128,573	116,611	143,369	153,246	142,980	153,822	134,361	145,134	140,621	129,419	0.7	0.06
JR211	58,382	80,232	87,976	95,655	101,081	110,548	112,581	94,216	98,601	88,895	3.7	0.36
JR212	36,118	39,508	44,448	36,424	34,111	36,709	36,170	34,325	29,664	35,904	-2.0	0.34
JR213	103,560	90,144	115,202	124,581	138,535	124,847	116,207	138,276	120,147	120,091	2.4	0.32
JR214	118,402	136,236	148,047	146,961	118,971	144,677	145,556	144,552	132,776	127,342	0.3	0.0123
JR215	72,980	83,085	90,853	95,603	117,179	59,861	60,912	66,720	77,496	66,794	-2.9	0.17
JR216	64,908	29,348	33,820	34,422	32,865	70,925	34,264	31,640	54,830	31,327	-1.1	0.01
JR217	69,829	100,249	131,280	129,556	116,193	72,235	102,406	109,088	61,369	105,760	-1.1	0.02
JR218	42,184	43,457	46,426	49,309	40,428	47,563	26,552	26,502	29,045	43,134	-4.3	0.29
JR219	46,015	87,857	95,096	116,486	131,153	123,232	117,251	102,915	107,704	133,704	6.9	0.45
JR220	6,817	9,095	11,091	22,276	26,675	27,101	40,304	43,880	45,657	57,300	23.7	0.94
JR223	15,698	17,810	18,708	16,529	18,747	18,383	18,371	15,701	17,418	17,707	0.2	0.01

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Johor

District : KULAI JAYA

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
JR209	27,118	29,106	25,673	26,689	28,084	30,378	43,167	40,454	60,232	30,713	6.1	0.45

District : KLUANG

JR301	4,796	5,443	5,177	5,210	5,208	5,432	6,223	5,913	5,742	5,249	1.5	0.35
JR302	10,246	9,616	12,978	16,412	15,217	15,149	13,923	15,070	13,822	14,273	3.5	0.37
JR303	14,409	10,514	7,103	9,322	7,769	9,269	8,101	7,941	7,802	10,676	-2.7	0.15
JR304	7,846	7,203	7,585	7,705	7,469	7,889	8,496	8,481	9,189	12,179	4.0	0.63
JR305	15,381	14,708	15,261	14,810	14,894	15,398	13,911	15,847	17,359	17,598	1.4	0.37
JR306	30,231	33,897	33,572	34,964	36,952	39,674	38,053	38,366	41,632	41,936	3.3	0.90
JR307	6,731	7,550	8,585	8,479	8,336	8,293	8,960	11,589	9,898	8,848	3.7	0.58

District : KOTA TINGGI

JR401	14,513	14,695	13,494	6,676	16,043	7,372	7,859	6,704	5,809	6,948	-10.3	0.60
JR402	16,595	19,628	19,890	17,768	17,026	19,618	15,404	18,095	13,424	16,602	-2.1	0.26
JR403	14,913	15,591	16,450	15,504	16,044	15,672	15,644	17,770	18,115	17,125	1.6	0.59
JR404	19,506	19,417	19,182	20,302	20,106	23,273	22,103	19,750	19,745	18,984	0.3	0.01
JR405	15,443	9,746	9,796	10,089	6,992	8,332	6,556	5,293	8,471	5,666	-8.6	0.67
JR406	8,298	8,725	9,643	6,672	7,703	6,535	5,908	6,272	6,002	7,285	-3.9	0.50
JR407	6,286	5,231	5,604	4,856	4,772	4,604	4,535	4,888	3,521	4,228	-4.4	0.72
JR408	4,188	4,212	4,141	3,784	4,042	4,514	4,926	4,038	5,349	4,271	1.6	0.22
JR409	13,807	16,676	15,424	15,869	14,588	13,322	15,017	13,993	15,827	17,060	0.5	0.03

District : MERSING

JR501	18,563	17,192	16,688	15,598	13,445	13,411	14,412	14,391	14,672	15,336	-2.3	0.43
JR502	4,840	5,824	4,671	4,590	5,073	7,080	7,544	5,533	5,508	5,222	1.8	0.11
JR503	4,247	4,262	4,477	4,633	4,481	4,490	4,720	4,143	2,656	4,969	-1.4	0.06
JR504	794	841	1,032	1,062	1,126	1,055	1,178	1,099	1,840	946	4.6	0.37

District : LEDANG

JR601	15,766	20,782	23,513	20,582	20,376	19,157	16,513	18,558	24,358	28,809	2.8	0.22
JR602	4,390	4,266	4,616	5,022	5,230	4,690	4,579	4,823	4,379	4,301	-0.1	0.00
JR603	6,793	7,682	9,293	12,793	11,166	9,917	11,017	10,961	8,938	8,947	2.3	0.14
JR604	11,587	13,746	14,292	12,866	12,493	14,246	14,989	17,714	15,846	16,136	3.4	0.65
JR605	33,229	32,018	33,881	31,746	26,870	25,276	26,589	22,197	30,888	29,672	-2.4	0.28
JR606	12,333	10,509	12,387	15,519	15,162	19,072	19,434	16,346	19,916	14,847	5.1	0.52

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Johor

District : MUAR

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
JR607	17,072	12,223	4,329	4,231	4,566	4,227	3,835	11,939	15,688	3,493	-4.7	0.05
JR608	25,207	23,100	16,391	17,594	17,384	16,027	16,327	11,024	9,194	17,438	-7.3	0.55
JR609	6,751	6,536	7,738	7,121	6,063	6,871	7,753	7,046	7,178	6,282	-0.1	0.00
JR610	3,049	3,055	3,219	3,686	4,282	5,505	3,064	4,570	5,450	4,597	5.6	0.50
JR611	9,290	9,163	11,437	12,798	12,066	15,618	15,756	13,869	13,192	14,518	5.1	0.64
JR612	10,393	10,232	11,201	10,031	9,743	12,852	10,729	13,120	11,390	13,833	2.8	0.47
JR613	6,212	7,920	5,785	6,283	6,394	8,142	7,617	8,866	10,881	12,115	6.8	0.69

District : PONTIAN

JR701	8,877	9,193	9,965	10,068	12,845	10,080	11,176	10,357	12,605	12,039	3.2	0.56
JR702	13,926	17,789	14,480	14,406	12,125	16,772	15,061	14,678	15,945	16,690	0.8	0.05
JR703	5,643	5,569	6,578	6,385	6,436	6,455	6,680	6,669	9,015	7,644	3.8	0.69
JR704	16,478	18,656	18,950	18,006	16,482	15,967	15,658	14,920	14,102	14,480	-2.9	0.72
JR705	16,891	17,535	18,470	20,268	18,103	17,452	18,948	17,533	16,039	17,762	-0.4	0.04

District : SEGAMAT

JR801	13,880	14,145	14,648	15,237	15,781	15,875	16,826	16,800	17,751	15,954	2.3	0.79
JR802	12,322	12,367	12,779	12,968	13,938	14,985	14,283	14,595	14,834	14,421	2.3	0.80
JR803	11,060	10,875	11,031	11,067	12,085	12,418	12,342	11,718	13,014	13,110	2.1	0.79
JR804	8,037	8,074	8,024	9,900	9,561	10,614	12,257	9,462	8,637	7,839	1.1	0.05

STATISTIC FOR YEAR 2016

State : Johor

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

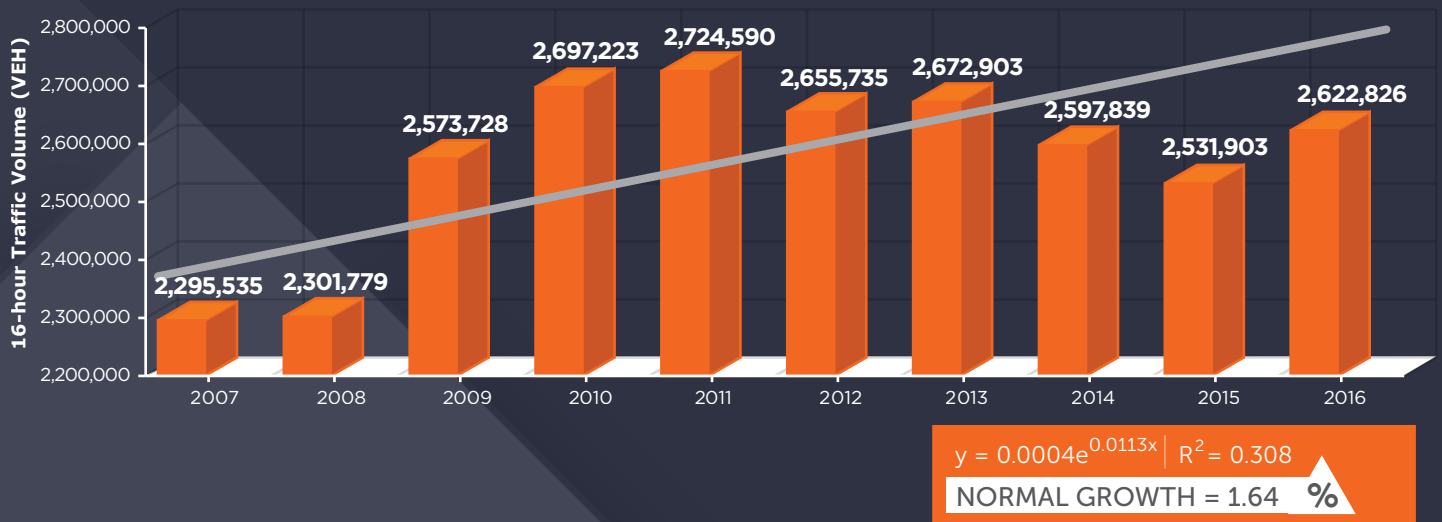




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Johor



JOHOR

There are 75 census stations in Johor. The 16-hour traffic volume shows a steady and gradual growth throughout the year 2007 until the year 2016, aside for years 2012, 2014 and 2015 which have undergone a slight drop in number of vehicles. As can be observed, for the year 2016, it showed an increase of traffic volume of 3.59% equivalent to 90,923 vehicles compared to the year 2015.



3.59%
Increase

For the year 2016, the observed traffic growth rate for the state of Johor is 1.64%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Johor.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Johor

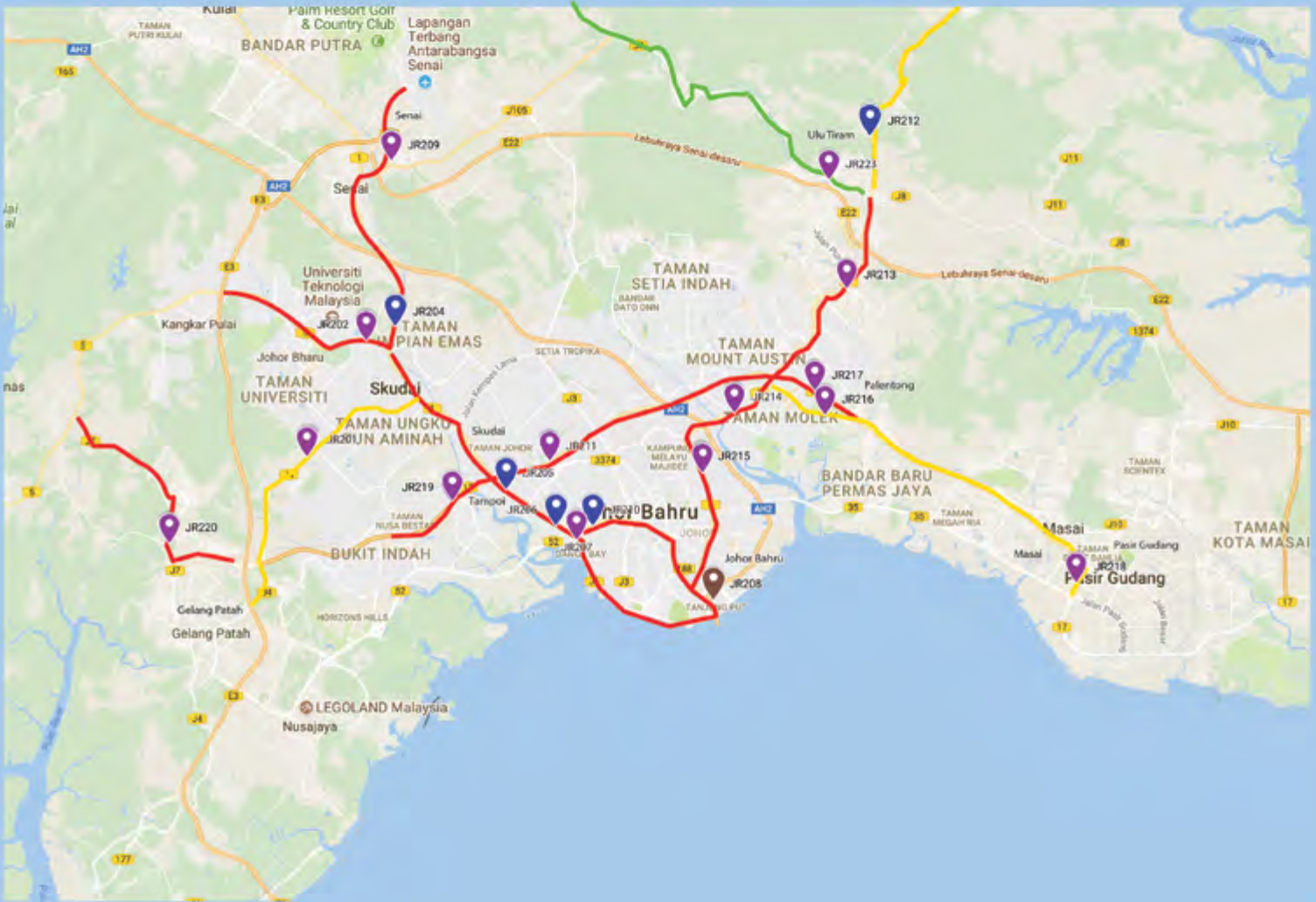
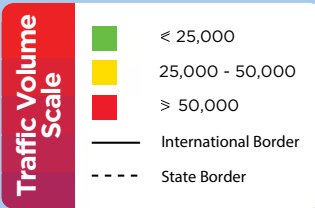
Traffic Volume Scale

- ≤ 25,000
- 25,000 - 50,000
- ≥ 50,000
- International Border
- State Border



AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Johor







PAHANG

Kampung Nyak Road - Felda Purun

- Kampung Nyak, Chenor
- 2016
- Received the Best Project Management Award
- Runner Up Inovation Day JKR Pahang 2016
- 19667.85 KM
- Road Facilities Maintenance Division, JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

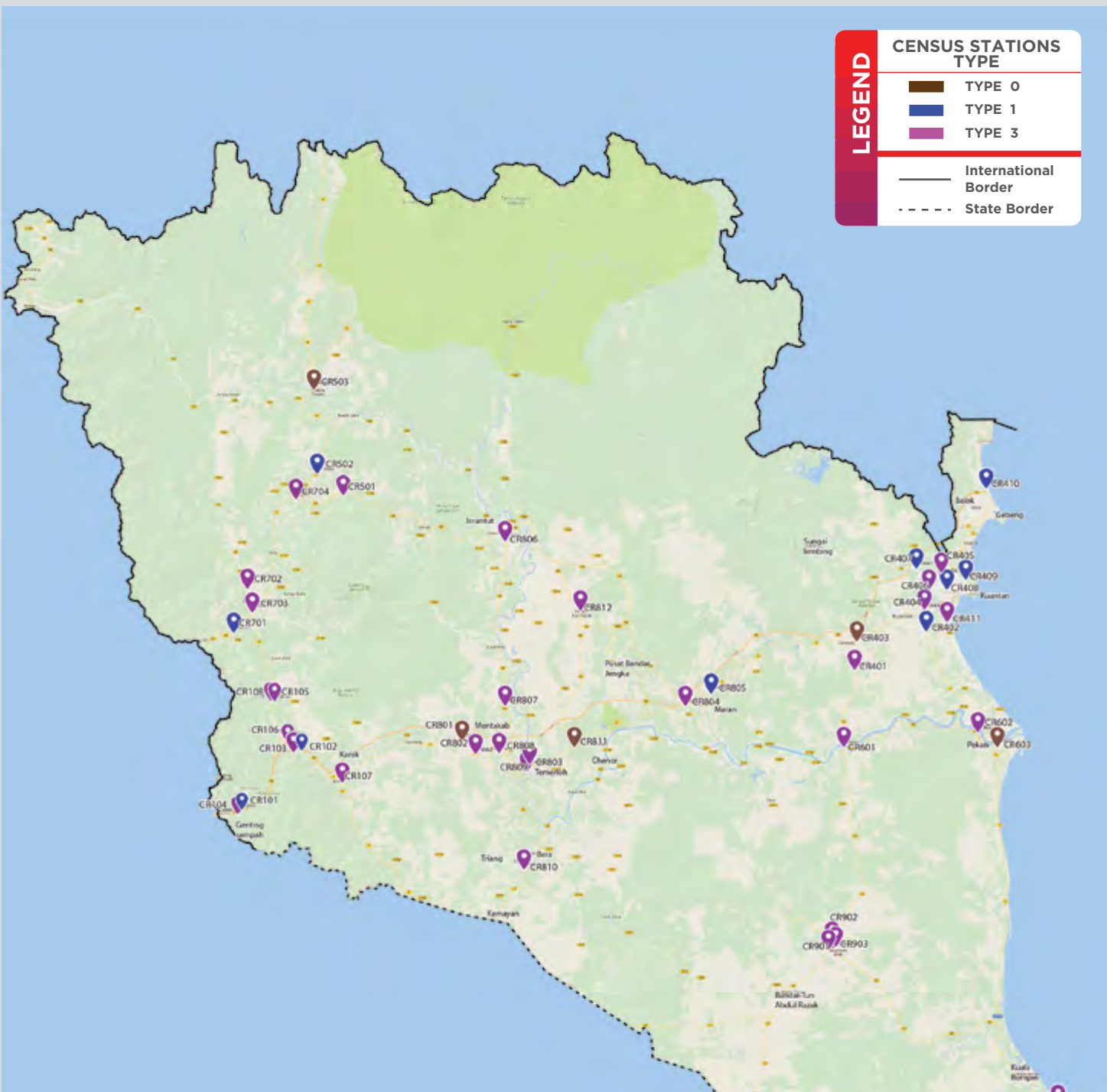
State : Pahang

LEGEND

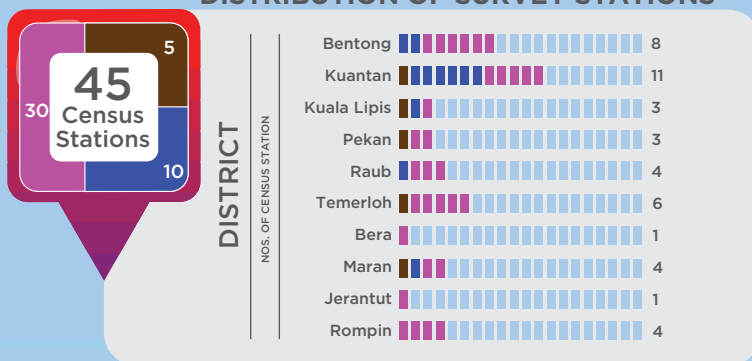
CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border



DISTRIBUTION OF SURVEY STATIONS



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Pahang

District : BENTONG

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
CR101	1	2	42.8	Kuantan-Kuala Lumpur (KL-Karak H'way)	3.3531389	101.8263056	K 2-2
CR102	1	2	68.1	Kuala Lumpur - Kuantan (KL-Karak H'way)	3.4798056	101.9546389	K 2-2
CR103	3	2	88.8	Jalon Karak - Sempadan Temerloh	3.4797500	101.9545278	T 1-1
CR104	3	68	225.4	Kuantan-Kuala Lumpur (Old Road)	3.3445556	101.8206389	T 1-1
CR105	3	8	204.5	Jalan Kuala Lumpur - Sempadan Kota Bharu	3.5813056	101.8935000	T 1-1
CR106	3	68	195.5	Jalan Kuala Lumpur - Sempadan Kota Bharu	3.4962500	101.9256667	T 1-1
CR107	3	9	1.6	Jalan Karak- Sempadan Negeri Sembilan	3.4096667	102.0410278	T 1-1
CR108	3	8	1.0	Bentong-Raub (Old Road)	3.5811111	101.8915278	T 1-1

District : KUANTAN

CR401	3	12	34.0	Kuantan-Segamat	3.6478333	103.1192222	T 1-1
CR402	1	3	16.0	Pekan-Kuantan	3.7315556	103.2690833	K 2-2
CR403	0	2	27.0	Kuantan-Maran	3.7081111	103.1215278	K 2-2
CR404	3	2	8.1	Kuantan-Maran	3.7742780	103.2647500	K 2-2
CR405	3	3	7.0	Kuantan Bypass (East Bound) (1km. from clover leaf junction)	3.8470556	103.3020833	K 2-2
CR406	3	3	7.5	Kuantan Bypass (West Bound) (1km. from clover leaf junction)	3.8160556	103.2748056	K 2-2
CR407	1	231	13.0	Kuantan-Sungai Lembing	3.8627500	103.2498611	T 1-1
CR408	1	231	2.0	Kuantan-Sungai Lembing	3.8187780	103.3124170	K 2-2
CR409	1	2	4.8	Kuantan-Kemaman	3.8374170	103.3526940	K 2-2
CR410	1	3	30.5	Kuantan - Kemaman (Sg. Ular)	4.0336940	103.3965280	T 1-1
CR411	3	183	8.5	Kuantan-Tanjung Lumpur-Penor	3.7486111	103.3144722	K 2-2

District : KUALA LIPIS

CR501	3	64	212.5	Kuantan-Jerantut-Benta (after Kampong Tanjung Besar)	4.0184444	102.0435278	T 1-1
CR502	1	8	227.8	Kuantan-Jerantut-Benta-Kuala Lipis (2.4km to Kuala Lipis road)	4.1738611	102.0160833	T 1-1
CR503	0	8	282.0	Kuala Lumpur-Kuala Lipis-Kampong Padang Tuanku-Kota Bahru	4.2413611	101.9825833	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Pahang

District : PEKAN

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
CR601	3	12	40.0	Pekan-Batu Balik (Simpang Paloh Hinai)	3.4865278	103.0956944	T 1-1
CR602	3	82	5.0	Pekan-Batu Balik (Kg. Pulau Keladi)	3.5179720	103.3762220	T 1-1
CR603	0	3	48.0	Pekan-Nenasi (In front of JKR Pekan)	3.4901110	103.4172780	T 1-1

District : RAUB

CR701	1	55	230.6	Kuantan-Tranum-Gap (50m east of the junction)	3.7284722	101.8116389	T 1-1
CR702	3	C5	4.8	Raub-Cheroh	3.8238611	101.8412500	T 1-1
CR703	3	8	239.9	Kuantan-Tranum-Raub	3.7726111	101.8532222	T 1-1
CR704	3	8	228.6	Kuantan-Benta-Raub	4.0123611	101.9424722	T 1-1

District : TEMERLOH

CR801	0	2	115.0	Kuantan-Karak	3.5005556	102.2926667	T 1-1
CR802	3	2	219.5	Mentakab Bypass (400m. fr. first junction towards Temerloh)	3.4701944	102.3226389	T 1-1
CR803	3	2	130.4	Kuantan-Temerloh (500 ft from Temerloh bridge towards Maran)	3.4458056	102.4333611	K 2-2
CR807	3	98	146.5	Kuantan-Temerloh-Jerantut	3.5754444	102.3824444	T 1-1
CR808	3	87	132.0	Kuantan-Mentakab	3.4736940	102.3710280	K 2-2
CR809	3	10	126.7	Kuantan-Temerloh-Triang	3.4360278	102.4309722	T 1-1

District : BERA

CR810	3	10	93.0	Kuantan-Temerloh-Kemayan	3.2293611	102.4234167	T 1-1
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District : MARAN

CR804	3	2	80.5	Kuantan - Maran (Kg. Kemap)	3.5730000	102.7620000	T 1-1
CR805	1	2	70.9	Kuantan - Maran (Kg. Luit)	3.6007500	102.8162500	T 1-1
CR811	0	83	32.7	Kuantan - Maran - Jerantut (Kg. Awah)	3.4927222	102.5308889	T 1-1
CR812	3	83	39.0	Jerantut - Maran	3.7720000	102.5416944	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Pahang

District : JERANTUT

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
CR806	3	98	1.6	Jerantut - Kampong Kerbau	3.9208889	102.3841944	T 1-1

District : ROMPIN

CR901	3	12	104.4	Kuantan - Segamat (400m Bkt. Ibam - Rompin junction south bound)	3.0594722	103.0620556	T 1-1
CR902	3	12	102.2	Kuantan - Segamat (400m Bkt. Ibam - Rompin junction north bound)	3.0740830	103.0708610	T 1-1
CR903	3	63	18.1	Bkt. Ibam - Rompin (400m from Kuantan - Segamat junction east bound)	3.0638611	103.0753333	T 1-1
CR904	3	3	146.6	Kuantan - Rompin - Endau	2.7343890	103.5446390	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Pahang

APRIL 2016

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	Busses	Motorcycles	Total
CR101	-	33,133	2,754	1600-1700	71.1	12.8	6.2	4.3	1.4	4.2	100.0
CR102	-	30,238	2,699	1700-1800	66.6	14.2	6.2	4.6	1.2	7.2	100.0
CR103	-	6,428	624	1700-1800	57.7	20.6	5.3	3.4	0.7	12.2	100.0
CR104	-	372	48	1500-1600	32.5	11.3	21.8	11.3	3.0	20.2	100.0
CR105	-	12,611	1,144	1700-1800	52.5	24.6	7.9	5.1	1.4	8.5	100.0
CR106	-	15,963	1,544	1700-1800	49.6	18.9	6.2	3.0	0.5	21.8	100.0
CR107	-	3,884	345	1700-1800	41.2	20.8	7.2	5.8	0.4	24.6	100.0
CR108	-	1,643	176	1700-1800	33.5	25.0	5.6	2.9	1.0	32.0	100.0

District : KUANTAN

CR401	-	1,788	172	1600-1700	49.6	11.4	6.3	3.8	0.8	28.2	100.0
CR402	-	24,777	2,411	1700-1800	72.3	11.4	4.0	3.3	0.7	8.3	100.0
CR403	33,879	29,688	2,837	1800-1900	68.2	13.9	5.2	4.3	1.0	7.5	100.0
CR404	-	64,552	7,174	1700-1800	68.6	9.6	4.3	1.6	0.6	15.3	100.0
CR405	-	56,330	6,001	1700-1800	62.0	17.9	9.1	3.8	0.4	6.8	100.0
CR406	-	68,313	6,681	1800-1900	60.7	12.3	8.2	4.8	0.5	13.5	100.0
CR407	-	24,877	2,417	0700-0800	67.6	9.2	2.7	1.5	0.4	18.6	100.0
CR408	-	32,391	2,523	1700-1800	72.3	9.2	1.5	0.3	0.6	16.0	100.0
CR409	-	35,712	3,447	1700-1800	74.7	5.4	2.6	0.5	0.3	16.5	100.0
CR410	-	20,602	2,314	0700-0800	59.7	12.8	4.7	4.1	0.5	18.1	100.0
CR411	-	22,364	2,806	1900-2000	67.3	14.6	1.5	0.1	0.3	16.3	100.0

District : KUALA LIPIS

CR501	-	1,788	172	1600-1700	49.6	11.4	6.3	3.8	0.8	28.2	100.0
CR502	-	8,815	750	1700-1800	67.1	13.1	6.7	4.2	1.3	7.5	100.0
CR503	10,537	8,790	716	1700-1800	61.1	9.2	5.8	4.8	1.0	18.1	100.0

District : PEKAN

CR601	-	9,233	782	1800-1900	56.3	18.1	6.4	10.0	0.6	8.7	100.0
CR602	-	5,413	490	1700-1800	50.7	17.5	6.9	5.6	0.2	19.0	100.0
CR603	12,867	11,637	944	1700-1800	57.2	13.2	5.0	2.1	0.5	21.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Pahang

APRIL 2016

District : RAUB

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
CR701	-	515	46	1000-1100	50.5	10.4	4.7	1.4	0.1	32.9	100.0
CR702	-	14,677	1,120	1700-1800	41.1	15.0	12.3	6.9	0.6	24.0	100.0
CR703	-	8,020	671	1600-1700	62.1	10.4	6.7	3.3	0.9	16.5	100.0
CR704	-	7,849	670	1700-1800	59.9	11.1	9.1	5.7	1.4	12.7	100.0

District : TEMERLOH

CR801	16,252	14,343	1,314	1300-1400	56.7	9.7	11.1	6.9	0.6	14.9	100.0
CR802	-	8,069	741	1600-1700	60.4	5.0	9.1	15.4	0.1	9.9	100.0
CR803	-	26,298	2,489	0700-0800	72.7	3.5	3.9	3.5	0.3	16.1	100.0
CR807	-	9,994	920	1700-1800	67.1	4.9	7.2	6.9	0.8	13.2	100.0
CR808	-	25,577	2,511	1900-2000	70.0	7.3	3.8	2.6	0.6	15.7	100.0
CR809	-	12,944	1,278	1800-1900	71.9	4.2	4.7	5.5	0.5	13.2	100.0

District : BERA

CR810	-	11,952	1,265	1300-1400	49.2	14.4	12.9	6.4	0.3	16.7	100.0
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District : MARAN

CR804	-	6,922	547	1500-1600	58.3	14.0	9.1	4.7	0.5	13.4	100.0
CR805	-	6,721	509	1500-1600	59.0	14.1	8.4	5.6	0.5	12.5	100.0
CR811	9,461	8,559	821	1700-1800	75.2	5.5	5.8	1.7	0.4	11.5	100.0
CR812	-	10,707	1,027	1700-1800	63.5	12.1	5.7	3.4	0.4	15.0	100.0

District : JERANTUT

CR806	-	14,746	1,318	0700-0800	62.1	15.9	4.7	2.9	0.4	14.1	100.0
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District : ROMPIN

CR901	-	9,601	794	1800-1900	60.7	16.4	6.7	6.3	0.9	8.9	100.0
CR902	-	10,124	906	1700-1800	56.4	17.7	7.1	7.6	0.7	10.5	100.0
CR903	-	9,869	867	1800-1900	62.5	16.0	3.8	1.9	0.5	15.4	100.0
CR904	-	8,148	753	1700-1800	57.9	15.9	7.3	5.1	0.6	13.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Pahang

OCTOBER 2016

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	Busses	Motorcycles	Total
CR101	-	36,640	3,112	1600-1700	67.1	15.1	6.1	5.4	1.5	4.8	100.0
CR102	-	31,834	2,885	1700-1800	64.8	14.3	6.3	5.3	1.2	8.0	100.0
CR103	-	6,344	621	1700-1800	64.8	11.9	4.7	3.2	0.7	14.8	100.0
CR104	-	266	29	1700-1800	36.5	13.5	14.3	3.8	3.0	28.9	100.0
CR105	-	13,613	1,243	1700-1800	58.1	18.3	7.2	4.8	1.3	10.3	100.0
CR106	-	16,619	1,496	1700-1800	54.7	15.0	4.6	2.8	0.5	22.4	100.0
CR107	-	3,543	311	1700-1800	41.6	20.0	6.4	6.2	0.5	25.4	100.0
CR108	-	1,574	146	0700-0800	35.2	23.0	7.7	5.9	1.0	27.2	100.0

District : KUANTAN

CR401	-	10,614	1,220	1000-1100	63.4	12.9	7.6	7.5	0.7	7.9	100.0
CR402	-	22,759	2,487	1700-1800	73.6	11.9	3.8	3.4	0.7	6.5	100.0
CR403	34,836	30,774	2,933	1800-1900	72.5	10.0	5.1	4.3	1.1	7.1	100.0
CR404	-	63,298	4,973	1700-1800	68.0	11.5	4.2	1.7	0.7	13.8	100.0
CR405	-	53,316	7,475	0700-0800	63.4	20.3	6.2	2.4	0.2	7.5	100.0
CR406	-	61,724	7,401	1700-1800	64.4	13.0	4.8	3.7	0.7	13.5	100.0
CR407	-	24,294	1,983	0700-0800	68.5	10.5	2.9	1.5	0.6	16.0	100.0
CR408	-	27,985	2,142	1700-1800	69.0	12.1	1.9	0.4	0.9	15.7	100.0
CR409	-	39,785	4,503	1700-1800	77.4	4.2	1.9	0.6	0.3	15.5	100.0
CR410	-	29,097	3,640	0700-0800	60.8	14.1	4.4	3.4	0.5	16.7	100.0
CR411	-	25,430	2,926	0700-0800	67.2	13.3	3.6	1.6	0.4	14.0	100.0

District : KUALA LIPIS

CR501	-	1,799	183	0700-0800	52.8	9.0	7.6	3.0	0.5	27.1	100.0
CR502	-	8,451	773	1700-1800	66.2	13.2	7.4	4.3	1.4	7.4	100.0
CR503	10,583	8,725	742	1700-1800	62.6	6.9	6.3	6.1	0.9	17.3	100.0

District : PEKAN

CR601	-	9,238	864	1700-1800	57.2	16.5	8.9	8.8	0.7	8.0	100.0
CR602	-	4,581	432	0700-0800	54.4	17.1	5.2	5.3	0.4	17.7	100.0
CR603	12,584	11,602	947	1700-1800	56.5	13.4	5.2	3.2	0.5	21.1	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Pahang

OCTOBER 2016

District : RAUB

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
CR701	-	1,274	107	1100-1200	55.6	11.7	6.6	2.7	0.6	22.8	100.0
CR702	-	16,180	1,414	0700-0800	56.9	14.7	7.3	3.6	1.2	16.3	100.0
CR703	-	9,636	852	1400-1500	54.5	11.7	6.2	2.3	0.6	24.6	100.0
CR704	-	7,507	629	1300-1400	57.0	13.1	10.1	5.1	1.3	13.4	100.0

District : TEMERLOH

CR801	18,428	17,117	1,850	1600-1700	57.9	10.3	11.2	6.4	0.5	13.7	100.0
CR802	-	8,898	1,470	1900-2000	63.9	7.3	9.2	10.2	0.2	9.3	100.0
CR803	-	24,914	2,449	0700-0800	72.1	7.5	3.9	2.9	0.4	13.3	100.0
CR807	-	11,945	963	1700-1800	66.8	8.6	5.7	4.9	0.7	13.3	100.0
CR808	-	20,361	1,972	0700-0800	68.0	7.6	4.6	2.1	0.7	16.9	100.0
CR809	-	14,391	1,467	1700-1800	68.5	6.9	5.0	5.4	0.4	13.8	100.0

District : BERA

CR810	-	9,073	823	1600-1700	47.1	18.1	10.3	8.5	0.4	15.6	100.0
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District : MARAN

CR804	-	5,671	486	1300-1400	61.7	10.6	9.3	5.7	0.7	11.9	100.0
CR805	-	6,960	556	1500-1600	57.7	15.8	8.3	5.9	0.4	11.9	100.0
CR811	9,400	8,701	744	1700-1800	71.7	8.4	6.3	2.2	0.3	11.1	100.0
CR812	-	11,336	1,034	1300-1400	63.3	14.4	5.2	3.2	0.4	13.5	100.0

District : JERANTUT

CR806	-	15,124	1,651	0700-0800	60.0	17.2	4.7	2.7	0.6	14.7	100.0
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District : ROMPIN

CR901	-	9,969	772	1700-1800	58.2	17.6	6.8	7.6	0.9	9.0	100.0
CR902	-	10,903	922	1700-1800	58.1	16.0	6.0	8.3	0.8	10.8	100.0
CR903	-	11,142	936	1700-1800	60.3	16.4	3.4	3.3	0.6	16.1	100.0
CR904	-	8,225	710	1600-1700	58.1	15.5	6.6	8.3	0.6	10.8	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Pahang

AVERAGE 2016

District : BENTONG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
CR101	34,887	2,933	69.1	14.0	6.2	4.8	1.4	4.5	100%	C	2027
CR102	31,036	2,792	65.7	14.3	6.3	5.0	1.2	7.6	100%	B	2026
CR103	6,386	623	61.3	16.3	5.0	3.3	0.7	13.5	100%	A	-
CR104	319	39	34.5	12.4	18.0	7.5	3.0	24.6	100%	A	2050
CR105	13,112	1,194	55.3	21.4	7.5	5.0	1.3	9.4	100%	D	2019
CR106	16,291	1,520	52.2	17.0	5.4	2.9	0.5	22.1	100%	E	2019
CR107	3,714	328	41.4	20.4	6.8	6.0	0.4	25.0	100%	A	2159
CR108	1,609	161	34.4	24.0	6.6	4.4	1.0	29.6	100%	A	2069

District : KUANTAN

CR401	6,201	696	56.5	12.2	6.9	5.7	0.7	18.0	100%	A	2043
CR402	23,768	2,449	73.0	11.7	3.9	3.3	0.7	7.4	100%	A	2025
CR403	30,231	2,885	70.3	12.0	5.1	4.3	1.0	7.3	100%	A	2034
CR404	63,925	6,074	68.3	10.6	4.3	1.7	0.7	14.5	100%	F	R
CR405	54,823	6,738	62.7	19.1	7.6	3.1	0.3	7.1	100%	F	R
CR406	65,019	7,041	62.5	12.6	6.5	4.3	0.6	13.5	100%	F	R
CR407	24,585	2,200	68.0	9.8	2.8	1.5	0.5	17.3	100%	F	R
CR408	30,188	2,332	70.7	10.7	1.7	0.3	0.8	15.9	100%	A	-
CR409	37,748	3,975	76.1	4.8	2.3	0.6	0.3	16.0	100%	B	2030
CR410	24,850	2,977	60.3	13.5	4.6	3.8	0.5	17.4	100%	F	R
CR411	23,897	2,866	67.3	13.9	2.5	0.9	0.3	15.1	100%	A	2025

District : KUALA LIPIS

CR501	1,794	178	51.2	10.2	6.9	3.4	0.6	27.7	100%	A	2226
CR502	8,633	761	66.6	13.2	7.1	4.3	1.4	7.5	100%	A	2037
CR503	8,757	729	61.9	8.0	6.0	5.5	0.9	17.7	100%	A	2042

District : PEKAN

CR601	9,236	823	56.7	17.3	7.6	9.4	0.6	8.3	100%	A	2023
CR602	4,997	461	52.6	17.3	6.1	5.4	0.3	18.4	100%	A	2057
CR603	11,620	945	56.9	13.3	5.1	2.7	0.5	21.5	100%	A	2027

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Pahang

AVERAGE 2016

District : RAUB

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
CR701	894	77	53.1	11.0	5.6	2.1	0.3	27.8	100%	A	-
CR702	15,429	1,267	49.0	14.9	9.8	5.3	0.9	20.1	100%	C	2026
CR703	8,828	762	58.3	11.1	6.5	2.8	0.8	20.6	100%	A	-
CR704	7,678	650	58.5	12.1	9.6	5.4	1.4	13.1	100%	A	2101

District : TEMERLOH

CR801	15,730	1,582	57.3	10.0	11.2	6.6	0.5	14.3	100%	F	R
CR802	8,484	1,106	62.1	6.2	9.1	12.8	0.2	9.6	100%	D	2026
CR803	25,606	2,469	72.4	5.5	3.9	3.2	0.4	14.7	100%	A	-
CR807	10,970	942	66.9	6.8	6.4	5.9	0.7	13.2	100%	A	2024
CR808	22,969	2,242	69.0	7.5	4.2	2.4	0.6	16.3	100%	A	-
CR809	13,668	1,373	70.2	5.6	4.8	5.4	0.5	13.5	100%	C	2031

District : BERA

CR810	10,513	1,044	48.1	16.3	11.6	7.4	0.4	16.2	100%	B	2022
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District : MARAN

CR804	6,297	517	60.0	12.3	9.2	5.2	0.6	12.6	100%	A	-
CR805	6,841	533	58.4	14.9	8.3	5.8	0.4	12.2	100%	A	-
CR811	8,630	783	73.4	7.0	6.0	1.9	0.3	11.3	100%	A	2063
CR812	11,022	1,031	63.4	13.3	5.4	3.3	0.4	14.2	100%	A	2031

District : JERANTUT

CR806	14,935	1,485	61.1	16.5	4.7	2.8	0.5	14.4	100%	D	2019
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District : ROMPIN

CR901	9,785	783	59.4	17.0	6.7	6.9	0.9	9.0	100%	A	-
CR902	10,514	914	57.2	16.9	6.6	7.9	0.7	10.7	100%	A	-
CR903	10,506	902	61.4	16.2	3.6	2.6	0.5	15.7	100%	A	2059
CR904	8,187	732	58.0	15.7	6.9	6.7	0.6	12.1	100%	A	2037

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Pahang

District : BENTONG

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
CR101	25,430	26,758	27,091	27,039	31,444	29,697	32,903	31,920	33,272	34,887	3.5	0.91
CR102	21,061	20,703	22,224	28,109	27,653	28,470	26,509	28,300	30,436	31,036	4.4	0.79
CR103	7,463	6,517	7,618	6,286	7,009	6,348	6,259	6,204	6,640	6,386	-1.5	0.35
CR104	189	162	172	205	195	321	299	347	490	319	10.7	0.77
CR105	9,293	10,624	10,992	11,627	14,439	14,057	14,381	15,168	14,844	13,112	4.6	0.69
CR106	14,002	14,712	15,237	16,000	17,574	15,490	13,768	18,488	15,702	16,291	1.3	0.19
CR107	3,212	3,245	3,688	4,144	4,152	4,228	4,439	3,616	3,362	3,714	1.0	0.07
CR108	1,213	1,204	1,514	1,510	1,852	1,551	1,777	2,139	1,683	1,609	4.2	0.51

District : KUANTAN

CR401	5,266	5,712	7,510	7,298	7,710	8,817	8,153	7,157	9,288	6,201	3.1	0.26
CR402	12,232	11,212	11,687	14,589	13,645	14,737	14,961	21,024	25,039	23,768	8.9	0.85
CR403	24,565	23,395	26,064	28,248	29,142	31,138	31,416	31,876	29,856	30,231	3.0	0.71
CR404	54,038	43,855	53,191	59,580	66,023	78,340	81,363	67,420	56,196	63,925	3.4	0.30
CR405	23,175	28,877	35,804	35,325	37,595	48,105	58,126	61,322	51,699	54,823	9.9	0.85
CR406	24,112	29,194	31,827	37,703	36,093	72,396	59,122	56,172	53,066	65,019	10.9	0.77
CR407	18,990	21,231	25,334	23,845	28,580	31,994	36,043	36,464	43,477	24,585	6.4	0.54
CR408	39,018	36,189	41,475	42,503	39,016	37,735	38,351	37,162	40,659	30,188	-1.4	0.21
CR409	33,371	31,550	33,672	34,986	35,911	42,538	44,054	45,060	40,395	37,748	3.1	0.56
CR410	21,337	20,260	22,249	22,079	23,278	22,911	21,601	22,995	20,827	24,850	1.0	0.26
CR411	11,313	13,854	18,450	18,150	21,213	21,479	22,434	22,181	24,926	23,897	7.5	0.81

District : KUALA LIPIS

CR501	1,573	1,867	1,806	1,632	1,646	1,537	1,760	1,766	1,757	1,794	0.5	0.05
CR502	6,399	6,342	7,103	7,093	7,617	8,108	7,608	7,918	8,960	8,633	3.6	0.89
CR503	6,427	6,609	6,159	6,253	7,053	7,513	6,985	7,319	8,063	8,757	3.3	0.77

District : PEKAN

CR601	2,962	3,711	3,059	3,660	3,298	2,857	3,403	3,428	8,775	9,236	10.0	0.49
CR602	3,816	4,359	3,644	3,843	4,088	5,517	4,608	4,846	4,497	4,997	3.0	0.46
CR603	6,902	5,746	7,738	8,650	9,761	10,319	11,563	11,535	10,741	11,620	7.3	0.81

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Pahang

District : RAUB

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
CR701	601	1,112	884	833	779	910	822	713	735	894	-0.2	0.00
CR702	13,267	14,059	15,871	17,863	19,414	21,940	24,419	25,041	14,589	15,429	3.0	0.15
CR703	17,187	24,490	20,522	25,779	23,229	29,577	29,976	21,153	21,086	8,828	-3.8	0.10
CR704	8,862	11,287	10,409	18,299	18,922	18,409	16,792	12,188	13,718	7,678	0.4	0.00

District : TEMERLOH

CR801	12,106	11,567	11,614	11,771	11,597	13,281	13,328	15,673	14,874	15,730	3.7	0.79
CR802	6,861	6,844	7,177	7,173	7,776	8,118	8,101	7,992	7,606	8,484	2.2	0.76
CR803	26,664	27,191	32,628	32,933	33,902	31,265	31,256	27,535	26,479	25,606	-1.0	0.08
CR807	7,295	8,310	8,421	10,740	10,572	10,307	18,428	17,616	13,220	10,970	7.4	0.53
CR808	25,967	26,310	28,237	27,610	27,939	28,179	23,899	24,660	21,012	22,969	-2.3	0.48
CR809	11,389	11,332	11,472	14,260	14,339	14,243	13,807	13,244	12,522	13,668	1.8	0.31

District : BERA

CR810	7,674	7,434	7,109	9,721	11,348	12,300	14,429	13,257	12,490	10,513	6.6	0.60
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District : MARAN

CR804	7,866	7,647	7,350	7,516	7,487	6,885	4,837	5,937	7,054	6,297	-3.1	0.38
CR805	6,855	6,587	6,761	6,890	7,317	7,088	6,952	6,714	6,369	6,841	-0.2	0.02
CR811	7,943	8,253	8,074	8,599	9,499	9,991	10,290	9,820	8,683	8,630	1.6	0.27
CR812	8,486	8,447	9,950	7,902	8,761	10,837	11,550	10,293	11,250	11,022	3.6	0.60

District : JERANTUT

CR806	11,780	14,799	18,831	26,852	26,461	20,879	20,530	15,715	17,669	14,935	0.9	0.01
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District : ROMPIN

CR901	7,466	6,761	14,792	8,916	8,855	9,085	9,641	9,576	10,321	9,785	2.1	0.10
CR902	6,721	7,316	11,634	8,102	8,427	9,545	8,763	9,314	9,985	10,514	3.3	0.36
CR903	4,879	2,857	5,948	6,303	6,672	7,673	7,089	7,901	10,276	10,506	10.8	0.75
CR904	5,509	5,760	6,220	6,886	7,129	7,517	7,241	7,808	8,001	8,187	4.4	0.92

STATISTIC FOR YEAR 2016

State : Pahang

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

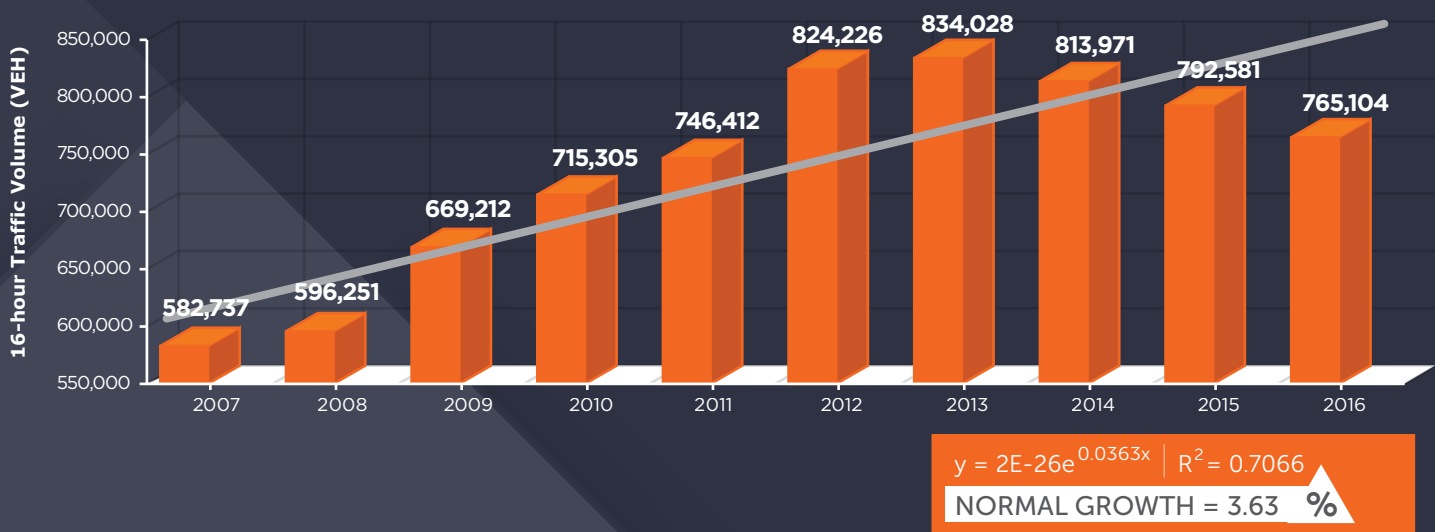


Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Melaka



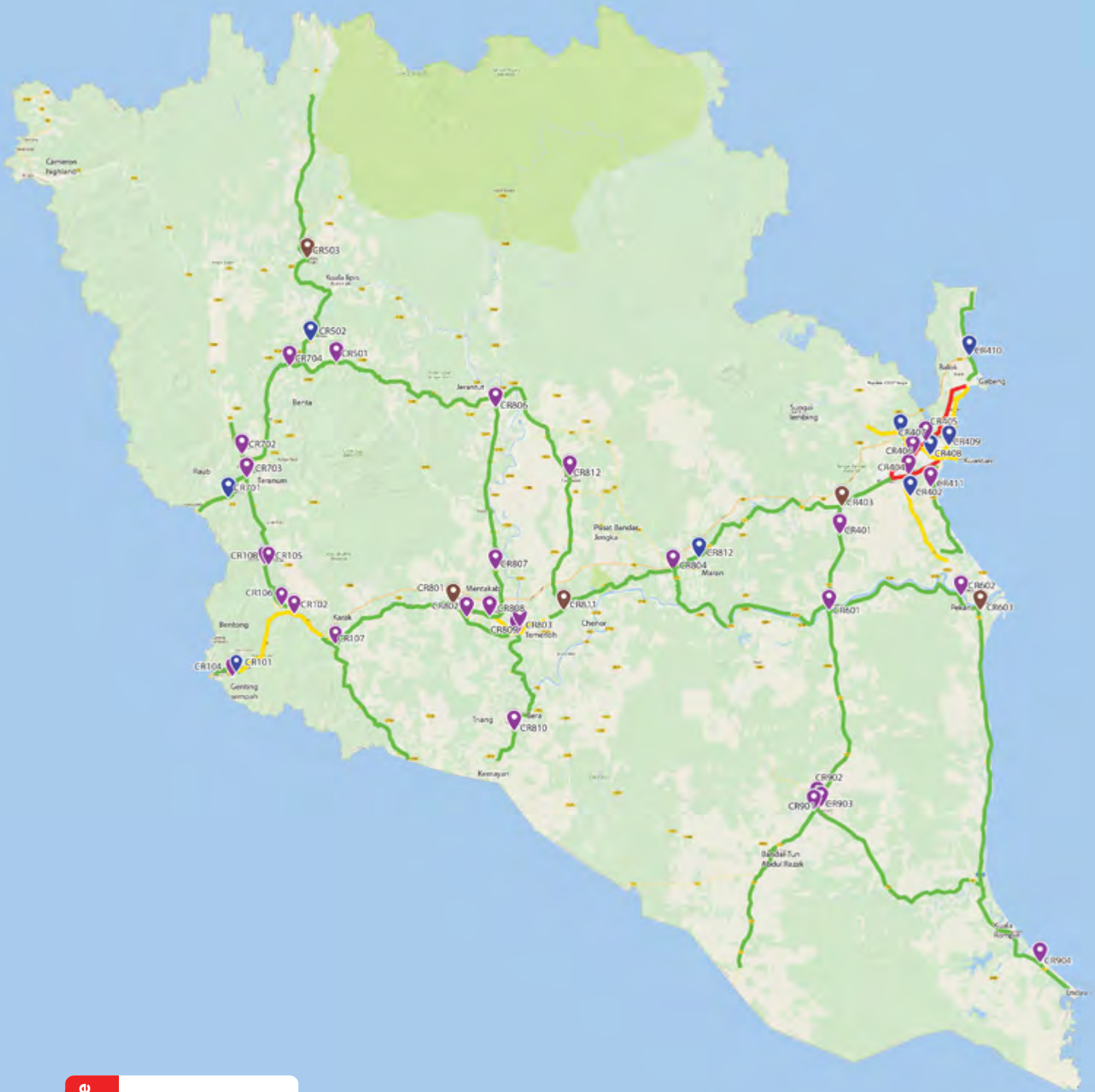
In the state of Pahang, there are 45 census stations. The pattern of 16-hour traffic volume exhibits a gradual increment from the year 2007 until the year 2013. The traffic volume starts to drop from the year 2014 until 2016. The number of vehicles dipped for about 27,477 which is 3.47% when it comes to the year 2016 compared to the year 2015.

3.47%
Decrease

For the year 2016, the observed traffic growth rate for the state of Pahang is 3.63%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Pahang.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Pahang



Traffic Volume Scale

- < 25,000
- 25,000 - 50,000
- > 50,000
- International Border
- - - State Border





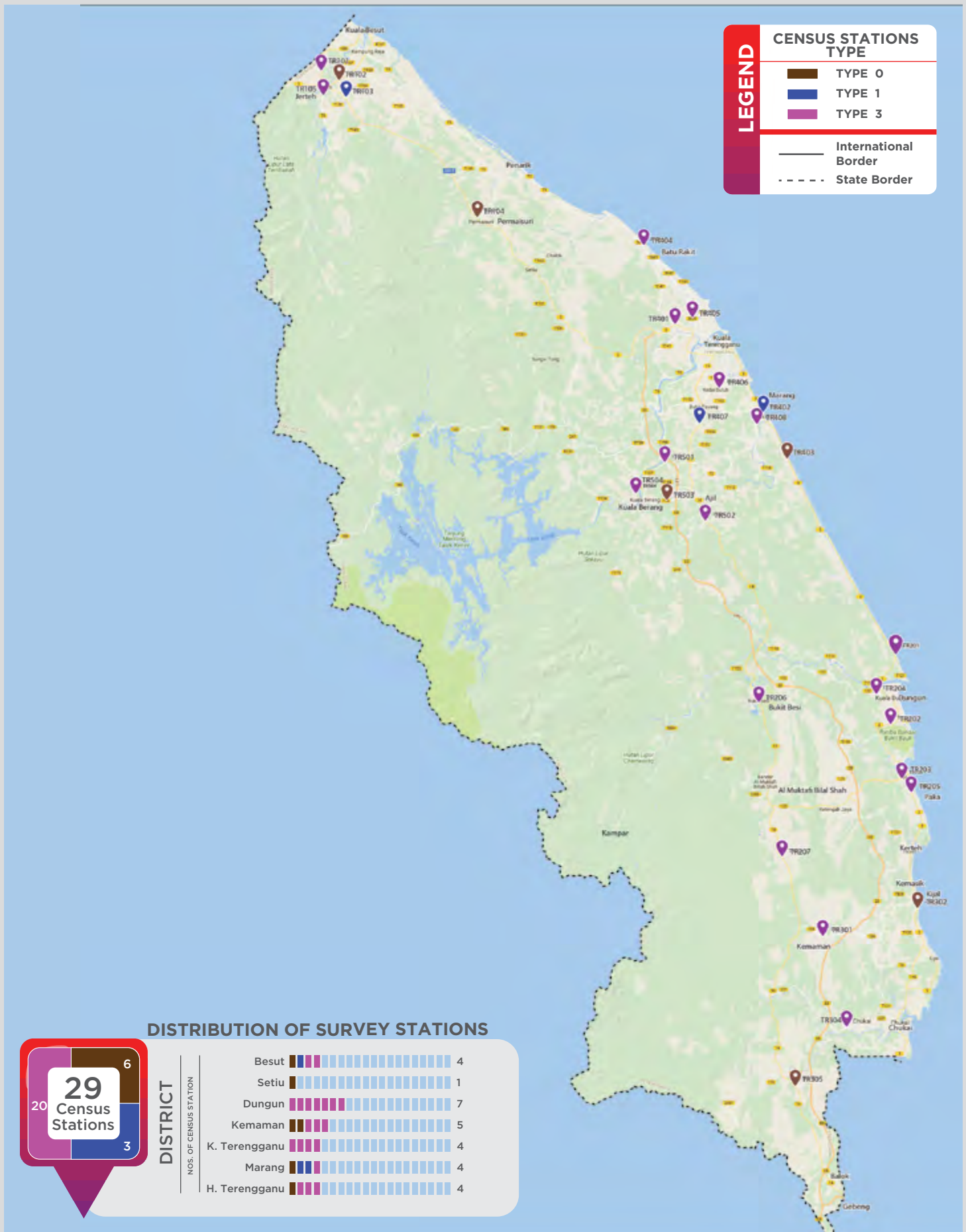
TERENGGANU

TENGGU MIZAN ROAD (FT 65)

- Tengku Mizan Road (FT 65)
 - Completed - 1989
 - Launched - 11 MAC 1990
- Launched by Sultan Mahmud Al-Muktafi Billah Shah (Sultan Terengganu)
- Larian Antarabangsa Jambatan Sultan Mahmud
 - 13587.05 KM
- Road Facilities Maintenance Division, JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

State : Terengganu



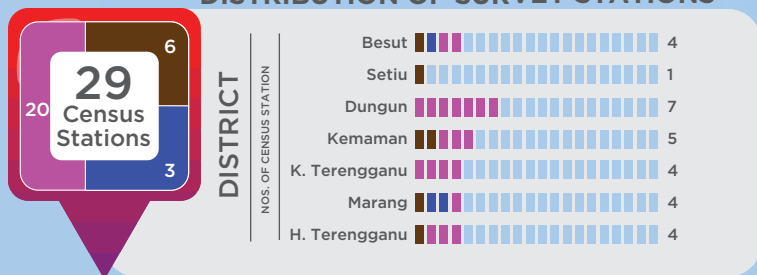
LEGEND

CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

- International Border
- State Border

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 (WGS84) (Latitude, Longitude)		Type of Carriageway
TR101	3	189	3.0	Jerteh - Kuala Besut	5.7672500	102.4892500	T 1-1
TR102	0	84	4.0	Jerteh - Kuala Besut (Kg. Raja)	5.7580833	102.5315556	T 1-1
TR103	1	3	62.0	Kuala Terengganu - Jerteh - Kota Bharu	5.7258056	102.5239722	T 1-1
TR105	3	T5	1.6	Jerteh - Keruak	5.7263889	102.4915278	T 1-1

District : SETIU

TR104	0	3	70.8	Kuala Terengganu - Kota Bharu (Bandar Permaisuri)	5.5289444	102.7395278	T 1-1
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District : DUNGUN

TR201	3	3	67.2	Kuala Terengganu - Dungun (Kg. Kuala Abang)	4.8277778	103.4163333	T 1-1
TR202	3	3	80.2	Kuala Terengganu - Dungun - Kemaman (Kuala Dungun - Paka)	4.7122778	103.4097778	K 2-2
TR203	3	122	5.6	Paka - Rasau	4.6238611	103.4282500	K 2-2
TR204	3	132	4.1	Kuala Dungun - Jambatan Jerangau (Kg. Che Lijah)	4.7607778	103.3856944	T 1-1
TR205	3	3	102.2	Paka - Kerteh (Hadapan YTL)	4.6027778	103.4433333	K 2-2
TR206	3	14	79.3	Lebuhraya Jerangau - Jabor (Bukit Besi (Besol))	4.7464167	103.1971944	T 1-1
TR207	3	14	111.2	Jalan Jerangau - Jabor (Kuari Pondok Limau)	4.4975833	103.2342778	T 1-1

District : KEMAMAN

TR301	3	124	1.0	Kemasik - Sri Bandi (Jerangau - Jabor Junction)	4.3709170	103.3011670	T 1-1
TR302	0	3	124.2	Kuala Terengganu - Kemaman - Kuantan	4.3958056	103.4483056	T 1-1
TR303	3	T13	7.0	Chukai - Paman	4.2239720	103.3395280	T 1-1
TR304	3	237	7.0	Air Putih - Paman	4.2233060	103.3392500	T 1-1
TR305	0	14	48.0	Cheneh - Kuala Terengganu (Jalan Jabor - Jerangau)	4.1322500	103.2547778	T 1-1

District : KUALA TERENGGANU

TR401	3	3	16.8	Kuala Terengganu - Jerteh (Tepoh)	5.3555833	103.0613611	K 2-2
TR404	3	3685	33.1	Kuala Terengganu - Kg. Merang (Meng. Panjang - Bt. Rakit)	5.4826944	103.0089722	T 1-1
TR405	3	3685	15.2	Gong Badak - Kuala Terengganu	5.3650278	103.0899444	K 2-2
TR406	3	T100	15.5	Kuala Terengganu - Chedering (Surau Panjang)	5.2533611	103.1499167	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Terengganu

District : MARANG

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
TR402	1	3	17.0	Kuala Terengganu - Marang	5.2106389	103.2032778	K 2-2
TR403	0	3	26.0	Kuala Terengganu - Marang	5.1407500	103.2417500	T 1-1
TR407	1	14	17.0	Kuala Terengganu - Kuala Berang	5.1979167	103.1015556	K 2-2
TR408	3	T2	1.6	Marang - Wakaf Tapai	5.1973889	103.1935000	T 1-1

District : HULU TERENGGANU

TR501	3	T107	11.0	Kuala Berang - Tanggol - Wakaf Tapai	5.1251667	103.0616667	T 1-1
TR502	3	14	146.0	Kuala Terengganu - Ajil - Jerangau	5.0397778	103.1105556	T 1-1
TR503	0	106	5.0	Kuala Terengganu - Ajil - Kuala Berang	5.0726110	103.0473060	K 2-2
TR504	3	247	1.0	Kuala Terengganu - Kuala Berang - Kg. Kuala Peng (Sg. Tong Setiu)	5.0853610	102.9979170	K 2-2

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Terengganu

APRIL 2016

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	Busses	Motorcycles	Total
TR101	-	16,391	1,585	1300-1400	60.2	9.3	3.5	0.9	0.2	25.9	100.0
TR102	19,002	17,118	1,389	1700-1800	75.3	6.6	2.4	1.1	0.3	14.3	100.0
TR103	-	23,596	1,964	1100-1200	66.8	12.4	3.1	2.1	0.6	15.1	100.0
TR105	-	13,285	1,328	1300-1400	58.8	13.0	4.3	1.4	0.3	22.2	100.0

District : SETIU

TR104	-	19,332	2,379	0700-0800	58.2	8.0	5.0	0.9	0.8	27.1	100.0
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District : DUNGUN

TR201	-	7,806	598	1600-1700	61.7	11.3	7.0	2.0	1.6	16.4	100.0
TR202	-	28,279	4,866	0700-0800	49.3	14.6	10.3	2.8	1.3	21.8	100.0
TR203	-	15,892	2,096	0700-0800	49.9	14.8	7.3	1.7	0.2	26.0	100.0
TR204	-	11,245	1,120	0800-0900	51.8	13.9	7.7	2.9	0.5	23.2	100.0
TR205	-	53,864	9,166	1700-1800	51.9	5.3	2.3	1.0	0.3	39.3	100.0
TR206	-	6,520	551	1900-2000	35.9	19.6	18.4	14.8	0.3	11.1	100.0
TR207	-	1,845	230	1800-1900	48.5	21.8	10.0	11.7	0.2	7.9	100.0

District : KEMAMAN

TR301	-	1,656	184	1700-1800	44.1	14.9	6.0	2.0	0.5	32.5	100.0
TR302	20,120	18,075	1,854	1700-1800	76.9	5.8	2.4	2.2	0.7	12.1	100.0
TR303	-	826	80	1700-1800	41.5	14.5	4.6	0.4	0.0	39.0	100.0
TR304	-	4,156	557	1700-1800	61.5	9.8	5.3	1.2	0.2	21.9	100.0
TR305	4,256	3,790	315	1800-1900	60.3	9.8	6.2	4.8	0.3	18.6	100.0

District : KUALA TERENGGANU

TR401	-	21,127	1,924	1700-1800	60.2	9.8	4.6	3.3	0.9	21.2	100.0
TR404	-	12,415	1,487	0700-0800	60.8	14.9	9.7	1.5	0.8	12.3	100.0
TR405	-	54,100	6,272	1700-1800	66.9	6.9	3.5	0.7	0.3	21.7	100.0
TR406	-	21,636	2,283	0700-0800	46.9	10.2	9.2	1.9	1.3	30.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Terengganu

APRIL 2016

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	Busses	Motorcycles	Total
TR402	-	33,323	2,944	1700-1800	69.6	6.4	2.4	0.4	0.6	20.5	100.0
TR403	15,462	13,558	1,212	1700-1800	72.7	6.8	3.7	0.8	1.2	14.8	100.0
TR407	-	21,207	1,804	1700-1800	68.6	8.1	4.1	1.3	0.3	17.6	100.0
TR408	-	11,768	1,323	0700-0800	60.0	5.3	1.5	0.4	0.2	32.6	100.0

District : HULU TERENGGANU

TR501	-	2,959	323	0700-0800	49.5	8.3	6.4	2.3	0.0	33.5	100.0
TR502	-	8,567	1,064	0700-0800	58.5	10.5	5.0	3.2	0.2	22.6	100.0
TR503	18,782	16,839	1,432	1700-1800	71.3	10.0	2.8	1.2	0.3	14.3	100.0
TR504	8,395	8,395	866	0700-0800	60.6	13.2	3.6	2.1	0.3	20.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State :Terengganu

OCTOBER 2016

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	Busses	Motorcycles	Total
TR101	-	17,669	1,624	0900-1000	59.7	12.5	3.6	0.9	0.2	23.1	100.0
TR102	18,546	16,934	1,367	1700-1800	76.4	6.3	2.1	1.0	0.4	13.8	100.0
TR103	-	21,614	1,715	1700-1800	66.3	13.6	2.7	1.9	0.6	14.8	100.0
TR105	-	13,837	1,455	1700-1800	62.9	10.9	4.3	0.7	0.2	21.0	100.0

District : SETIU

TR104	16,730	15,112	1,302	0700-0800	63.9	14.8	6.3	2.8	0.8	11.5	100.0
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District : DUNGUN

TR201	-	9,531	836	1700-1800	65.6	9.2	5.4	1.7	1.6	16.5	100.0
TR202	-	21,425	2,791	1700-1800	60.7	11.9	5.0	1.4	0.9	20.1	100.0
TR203	-	18,053	2,204	0700-0800	48.9	11.9	6.6	1.7	0.2	30.6	100.0
TR204	-	8,657	966	1700-1800	51.1	10.2	7.9	2.5	0.5	27.8	100.0
TR205	-	42,359	6,730	0700-0800	55.7	9.5	6.1	2.7	0.7	25.4	100.0
TR206	-	3,845	431	1400-1500	51.8	15.8	10.6	13.0	0.3	8.6	100.0
TR207	-	1,764	161	1500-1600	43.1	17.9	14.7	21.7	0.1	2.5	100.0

District : KEMAMAN

TR301	-	2,139	232	0700-0800	44.6	10.6	9.9	7.4	0.3	27.3	100.0
TR302	19,272	17,419	1,698	1700-1800	70.1	11.8	4.0	2.8	0.7	10.5	100.0
TR303	-	1,187	134	0700-0800	34.5	20.2	4.5	4.5	0.1	36.1	100.0
TR304	-	5,885	603	0700-0800	53.5	21.1	3.3	1.5	0.1	20.5	100.0
TR305	4,730	4,194	375	1800-1900	49.6	15.3	9.4	9.8	0.3	15.6	100.0

District : KUALA TERENGGANU

TR401	-	22,104	2,354	0700-0800	59.7	11.0	5.3	2.2	0.6	21.2	100.0
TR404	-	10,297	890	1100-1200	59.7	13.4	6.1	3.0	1.0	16.8	100.0
TR405	-	55,620	6,296	0700-0800	70.0	8.4	3.0	0.9	0.3	17.4	100.0
TR406	-	22,880	3,028	1700-1800	53.4	8.1	4.7	0.6	0.9	32.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State :Terengganu

OCTOBER 2016

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	Busses	Motorcycles	Total
TR402	-	35,493	3,211	1700-1800	70.6	8.0	2.7	0.7	0.7	17.3	100.0
TR403	3,429	3,075	259	1800-1900	70.4	10.6	3.8	1.1	1.4	12.7	100.0
TR407	-	28,172	2,452	0700-0800	68.9	8.6	3.3	0.8	0.5	17.9	100.0
TR408	-	9,080	1,007	0700-0800	61.9	5.4	2.3	0.5	0.3	29.6	100.0

District : HULU TERENGGANU

TR501	-	4,133	582	0700-0800	54.7	14.1	3.2	1.5	0.0	26.5	100.0
TR502	-	9,526	1,092	0700-0800	54.1	13.2	5.3	5.2	0.2	22.0	100.0
TR503	20,243	18,401	1,791	1700-1800	74.4	8.0	3.6	2.2	0.4	11.5	100.0
TR504	9,328	9,328	848	0700-0800	61.3	12.0	5.2	3.3	0.2	18.0	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State :Terengganu

AVERAGE 2016

District : BESUT

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
TR101	17,030	1,605	60.0	10.9	3.6	0.9	0.2	24.5	100%	E	2018
TR102	17,026	1,378	75.9	6.5	2.3	1.0	0.4	14.0	100%	C	-
TR103	22,605	1,839	66.6	13.0	2.9	2.0	0.6	14.9	100%	F	R
TR105	13,561	1,392	60.9	12.0	4.3	1.0	0.2	21.6	100%	C	2027

District : SETIU

TR104	17,222	1,841	61.0	11.4	5.6	1.9	0.8	19.3	100%	F	R
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District : DUNGUN

TR201	8,669	717	63.6	10.2	6.2	1.9	1.6	16.5	100%	A	-
TR202	24,852	3,829	55.0	13.2	7.7	2.1	1.1	20.9	100%	D	2040
TR203	16,973	2,150	49.4	13.3	7.0	1.7	0.2	28.3	100%	A	2071
TR204	9,951	1,043	51.4	12.0	7.8	2.7	0.5	25.5	100%	B	2025
TR205	48,112	7,948	53.8	7.4	4.2	1.8	0.5	32.4	100%	F	R
TR206	5,183	491	43.8	17.7	14.5	13.9	0.3	9.8	100%	A	-
TR207	1,805	196	45.8	19.9	12.3	16.7	0.1	5.2	100%	A	-

District : KEMAMAN

TR301	1,898	208	44.4	12.7	8.0	4.7	0.4	29.9	100%	A	2098
TR302	17,747	1,776	73.5	8.8	3.2	2.5	0.7	11.3	100%	D	2024
TR303	1,007	107	38.0	17.4	4.5	2.5	0.0	37.6	100%	A	2243
TR304	5,021	580	57.5	15.5	4.3	1.3	0.2	21.2	100%	A	2030
TR305	3,992	345	55.0	12.6	7.8	7.3	0.3	17.1	100%	A	-

District : KUALA TERENGGANU

TR401	21,616	2,139	60.0	10.4	4.9	2.7	0.7	21.2	100%	A	2088
TR404	11,356	1,189	60.3	14.1	7.9	2.3	0.9	14.5	100%	C	2025
TR405	54,860	6,284	68.4	7.7	3.3	0.8	0.3	19.6	100%	F	R
TR406	22,258	2,656	50.2	9.1	6.9	1.3	1.1	31.4	100%	F	R

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Terengganu

AVERAGE 2015

District : MARANG

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
TR402	34,408	3,077	70.1	7.2	2.6	0.6	0.7	18.9	100%	A	2072
TR403	8,317	735	71.5	8.7	3.7	1.0	1.3	13.7	100%	A	-
TR407	24,690	2,128	68.7	8.4	3.7	1.0	0.4	17.8	100%	A	2049
TR408	10,424	1,165	60.9	5.4	1.9	0.4	0.3	31.1	100%	A	-

District : HULU TERENGGANU

TR501	3,546	453	52.1	11.2	4.8	1.9	0.0	30.0	100%	A	2085
TR502	9,047	1,078	56.3	11.8	5.2	4.2	0.2	22.3	100%	B	-
TR503	17,620	1,612	72.8	9.0	3.2	1.7	0.4	12.9	100%	A	2143
TR504	8,862	857	61.0	12.6	4.4	2.7	0.3	19.1	100%	A	-

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State :Terengganu

District : BESUT

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
TR101	8,483	11,724	13,870	11,217	12,422	14,611	18,010	16,147	15,204	17,030	6.3	0.71
TR102	15,897	16,395	17,325	18,550	16,663	17,695	16,086	14,740	15,598	17,026	-0.5	0.0625
TR103	18,384	23,357	21,313	24,196	25,551	27,325	27,066	19,490	23,584	22,605	1.1	0.0698
TR105	10,134	12,420	9,424	11,199	12,827	12,895	13,896	14,343	11,940	13,561	3.1	0.4661

District : SETIU

TR104	11,942	12,572	12,088	14,188	14,451	14,882	14,693	15,806	15,569	17,222	3.8	0.91
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District : DUNGUN

TR201	8,248	7,813	10,652	10,440	13,386	8,929	9,821	9,007	8,068	8,669	-0.5	0.0072
TR202	25,215	23,463	29,051	28,602	30,035	27,856	29,864	28,124	28,171	24,852	0.6	0.05
TR203	14,803	13,581	12,412	11,028	13,605	14,453	13,818	12,820	14,526	16,973	1.6	0.17
TR204	5,986	6,534	8,017	8,300	10,791	8,393	9,284	10,027	10,166	9,951	5.4	0.69
TR205	21,107	20,500	29,995	29,818	33,471	26,867	37,896	34,451	35,009	48,112	7.5	0.76
TR206	4,884	5,937	6,623	6,350	6,945	5,952	5,896	5,513	4,758	5,183	-1.4	0.11
TR207	24,207	23,204	25,151	22,096	22,898	25,761	24,011	9,565	3,423	1,805	-25.0	0.62

District : KEMAMAN

TR301	1,645	1,744	1,660	1,649	1,655	2,090	2,091	2,173	1,860	1,898	2.4	0.45
TR302	14,899	15,228	15,417	16,831	17,498	18,418	19,086	19,298	16,258	17,747	2.2	0.4881
TR303	923	901	1,211	881	2,156	988	1,452	1,712	755	1,007	1.2	0.0119
TR304	2,547	1,353	2,441	4,400	2,424	3,337	3,434	3,424	3,878	5,021	8.9	0.5183
TR305	5,116	5,363	5,381	5,590	6,553	7,566	8,036	7,667	4,105	3,992	-0.7	0.01

District : KUALA TERENGGANU

TR401	20,791	21,153	20,282	23,673	22,183	22,263	22,722	22,556	25,586	21,616	1.3	0.33
TR404	8,654	9,104	9,474	14,219	11,812	12,679	15,597	13,667	11,455	11,356	3.8	0.3361
TR405	60,257	63,719	61,587	51,546	44,675	47,067	56,821	50,950	61,598	54,860	-1.0	0.0641
TR406	14,061	14,275	15,256	16,727	18,504	18,465	20,190	21,619	20,738	22,258	5.5	0.95

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Terengganu

District : MARANG

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
TR402	39,230	24,933	24,852	25,887	27,451	29,532	31,227	31,686	24,887	34,408	0.4	0.0059
TR403	12,429	13,347	13,288	14,409	15,103	14,435	13,712	15,221	12,925	8,317	-2.0	0.125
TR407	17,217	18,263	17,214	17,751	17,384	17,360	19,041	19,224	19,524	24,690	2.7	0.56
TR408	11,369	6,022	11,275	13,517	12,868	12,211	11,737	8,878	5,861	10,424	-1.6	0.0261

District : HULU TERENGGANU

TR501	2,446	2,750	2,918	3,050	2,840	2,956	2,894	2,702	2,884	3,546	1.9	0.3785
TR502	10,838	13,132	14,701	14,695	12,649	10,092	8,715	8,739	9,561	9,047	-5.0	0.5256
TR503	13,235	14,758	15,301	18,188	19,064	17,140	15,461	15,446	17,601	12,834	0.3	0.0033
TR504	12,209	11,654	12,765	12,280	12,314	10,426	8,723	7,271	8,092	8,862	-5.7	0.71

STATISTIC FOR YEAR 2015

State : Terengganu

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

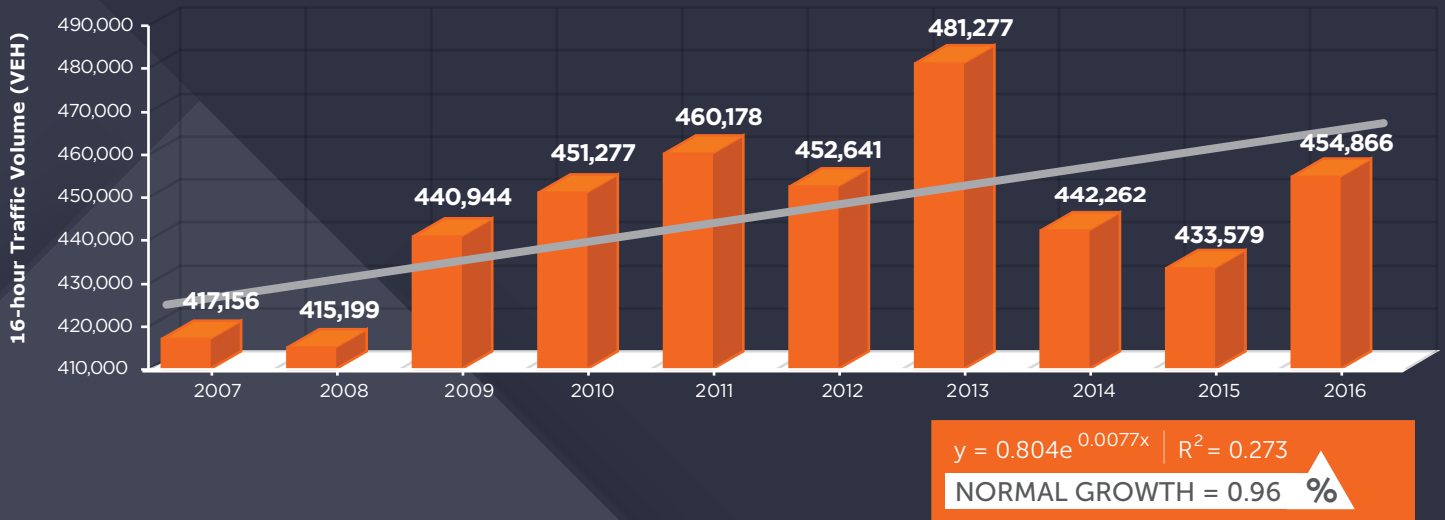




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Terengganu



TERENGGANU

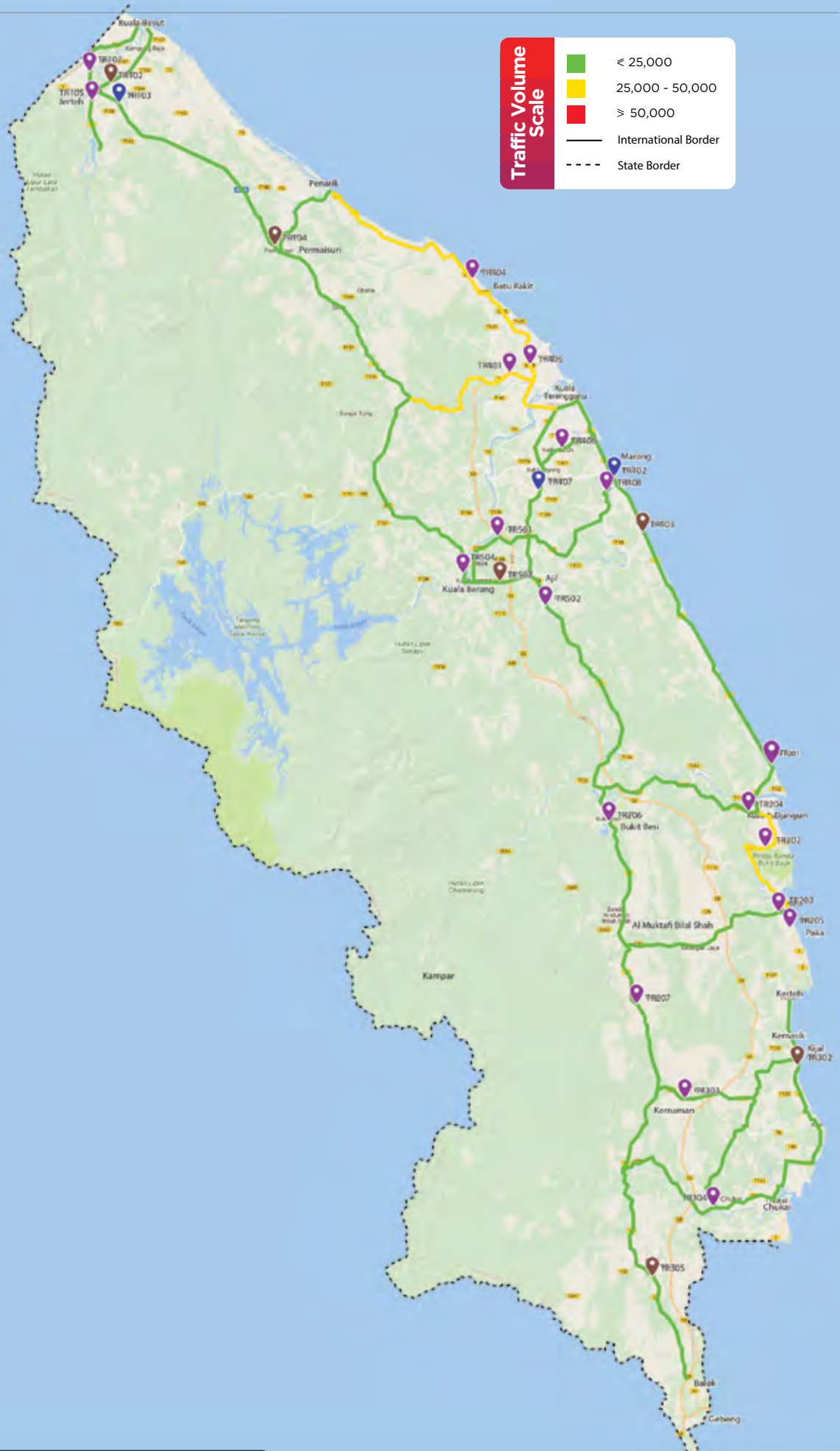
There are 29 census stations in Terengganu. The yearly 16-hour traffic volume shows a fluctuation in the number of vehicles since the year 2007 until the year 2016. There is a rise of 4.91% of traffic volume for the year 2016 which corresponds to 21,287 vehicles compared to the year 2015.



**4.91%
INCREASE**

For the year 2016, the observed traffic growth rate for the state of Terengganu is 0.96%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Terengganu.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP





KELANTAN

Tok Bok Road To Selising, Pasir Puteh, Kelantan Darul Naim (FASA II)

- Machang / Pasir Puteh, Kelantan
 - 31 Oktober 2016
- Connects Machang and Pasir Puteh Districts
- Alternative Route From Machang To Pasir Puteh
- Facilitates The Movement Of Vehicles Going To And From Machang And Pasir Puteh Districts
- Reduce Traffic Congestion During Morning And Evening Rush Hours
- Provides Decent Road Facilities To Accommodate Increased Traffic In Future
 - 21974.49 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

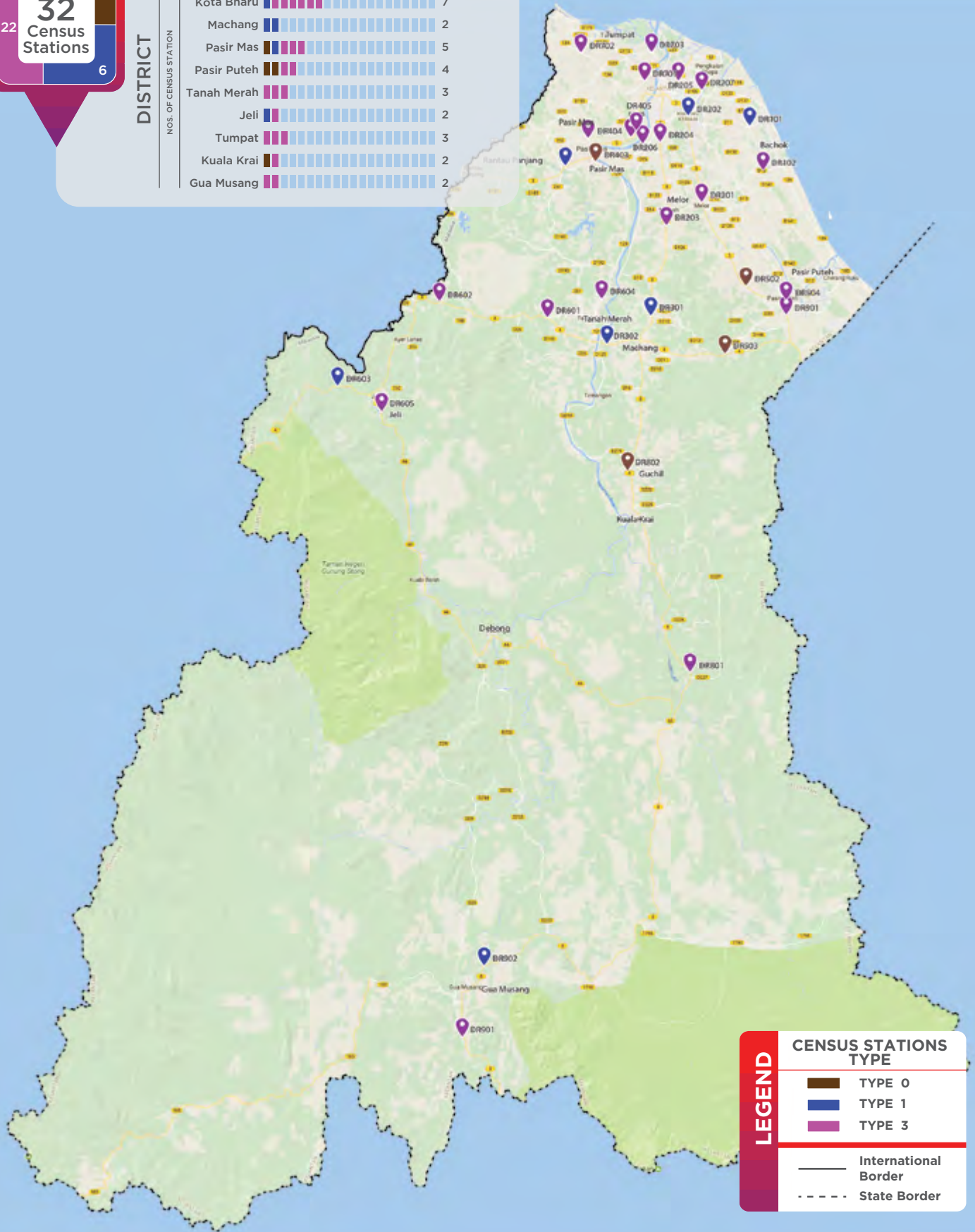
TRAFFIC CENSUS STATION MAP

State : Kelantan

DISTRIBUTION OF SURVEY STATIONS

22
32
Census
Stations
4
6

DISTRICT	NOS. OF CENSUS STATION
Bachok	2
Kota Bharu	7
Machang	2
Pasir Mas	5
Pasir Puteh	4
Tanah Merah	3
Jeli	2
Tumpat	3
Kuala Krai	2
Gua Musang	2



LEGEND

CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

— International Border
 - - - State Border

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Kelantan

District : BACHOK

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
DR101	1	D10	28.2	Kota Bharu - Pengkalan Baru - Bachok	6.0122778	102.3805556	T 1-1
DR102	3	211	18.7	Kota Bharu - Peringat - Gunong - Bachok	6.0724444	102.3620833	T 1-1

District : KOTA BHARU

DR201	3	3	19.3	Kota Bharu - Pasir Puteh	5.9673056	102.2953333	K 2-2
DR202	1	3	6.4	Kota Bharu - Pasir Puteh	6.0857222	102.2770000	K 2-2
DR203	3	8	20.9	Kota Bharu - Machang	5.9560580	102.2493030	T 1-1
DR204	3	8	8.1	Kota Bharu - Machang	6.0501667	102.2381389	T 1-1
DR205	3	57	4.0	Kota Bharu - Pengkalan Chepa	6.1349444	102.2629444	K 2-2
DR206	3	130	9.5	Wakaf Che Yeh - Salor - Pasir Mas	6.0481389	102.2137222	T 1-1
DR207	3	131	4.0	Kubang Krian - Sabak	6.1220556	102.2951389	T 1-1

District : MACHANG

DR301	1	8	35.5	Kota Bharu - Machang	5.8126389	102.2249722	K 2-2
DR302	1	4	47.2	Machang - Tanah Merah - Jeli	5.7726944	102.1631944	T 1-1

District : PASIR MAS

DR401	1	3	6.5	Pasir Mas - Rantau Panjang	6.0175278	102.1065000	T 1-1
DR402	3	3	6.5	Pasir Mas - Kota Bahru (Kg. Tar Tujuh)	6.0567500	102.1977222	T 1-1
DR403	0	129	1.0	Pasir Mas - Tanah Merah (Kg. Lemal)	6.0233889	102.1480278	T 1-1
DR404	3	D25	1.3	Pasir Mas - Meranti	6.0559444	102.1386389	T 1-1
DR405	3	208	7.2	Tendong - Pendek (Jambatan Sultan Ismail)	6.0636667	102.2054444	K 2-2

District : PASIR PUTEH

DR501	3	3	44.0	Kota Bharu - Pasir Puteh - Batu Melintang	5.8121111	102.4126389	T 1-1
DR502	0	3	34.1	Kota Bharu - Kuala Terengganu	5.8518889	102.3572222	T 1-1
DR503	0	4	19.5	Pasir Puteh - Machang	5.7586667	102.3281944	T 1-1
DR504	3	D7	41.0	Kota Bharu - Pasir Puteh - Kuala Semerak	5.8324444	102.4131389	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Kelantan

District : TANAH MERAH

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
DR601	3	4	56.2	Kota Bharu - Tanah Merah - Batu Melintang	5.8083333	102.0820000	T 1-1
DR602	3	4	76.4	Kota Bharu - Tanah Merah	5.8295556	101.9317500	T 1-1
DR604	3	129	27.0	Kota Bharu - Pasir Mas - Tanah Merah	5.8348056	102.1563056	T 1-1

District : JELI

DR603	1	4	6.1	Lebuh raya Timur - Barat	5.7140278	101.7901111	T 1-1
DR605	3	66	6.0	Jeli - Dabong	5.6796667	101.8510278	T 1-1

District : TUMPAT

DR701	3	D21	9.5	Kota Bharu - Tumpat / Palekbang	6.1347222	102.2162778	T 1-1
DR702	3	134	16.6	Kota Bharu - Pengkalan Kubor	6.1732778	102.1284167	T 1-1
DR703	3	D21	6.4	Chabang Tiga - Tumpat	6.1743889	102.2259444	T 1-1

District : KUALA KRAI

DR801	3	8	102.6	Kota Bharu - Gua Musang	5.3180833	102.2796389	T 1-1
DR802	0	8	61.5	Kota Bharu - Kuala Krai	5.6012778	102.1921944	T 1-1

District : GUA MUSANG

DR901	3	8	10.0	Gua Musang - Merapoh	4.8144444	101.9648611	T 1-1
DR902	3	8	5.0	Gua Musang - Renok - Kuala Krai	4.9129444	101.9932778	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kelantan

APRIL 2016

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	Busses	Motorcycles	Total
DR101	-	18,028	1,878	0700-0800	56.0	7.5	3.4	0.7	0.3	32.1	100.0
DR102	-	20,381	2,196	0700-0800	59.0	9.2	4.6	0.9	0.9	25.4	100.0

District : KOTA BHARU

DR201	-	31,291	4,554	1700-1800	67.1	6.0	5.7	1.3	0.5	19.4	100.0
DR202	-	50,950	4,196	1700-1800	74.8	2.9	1.3	0.3	0.4	20.3	100.0
DR203	-	27,465	3,181	1700-1800	77.0	3.9	0.7	0.3	0.6	17.5	100.0
DR204	-	27,721	3,145	1700-1800	73.0	4.9	1.0	0.3	0.6	20.2	100.0
DR205	-	49,912	5,274	0700-0800	69.2	3.9	0.8	0.1	0.4	25.6	100.0
DR206	-	9,537	925	1700-1800	63.9	7.6	4.3	0.5	0.6	23.2	100.0
DR207	-	42,975	3,949	0800-0900	68.2	2.5	1.1	0.7	0.3	27.2	100.0

District : MACHANG

DR301	-	28,675	2,741	1700-1800	75.3	8.1	3.4	1.4	0.5	11.3	100.0
DR302	-	10,245	957	1700-1800	69.8	11.9	4.0	2.9	0.4	11.1	100.0

District : PASIR MAS

DR401	-	19,909	1,717	1700-1800	73.0	7.0	3.1	1.0	0.8	15.2	100.0
DR402	-	18,415	1,830	1700-1800	70.0	4.0	2.5	0.2	0.8	22.5	100.0
DR403	23,059	20,940	1,786	0700-0800	65.2	6.3	9.1	0.7	0.7	18.0	100.0
DR404	-	14,562	1,353	0700-0800	57.9	3.8	3.7	0.5	0.2	33.9	100.0
DR405	-	16,338	1,609	1700-1800	74.0	3.8	7.1	0.6	0.1	14.4	100.0

District : PASIR PUTEH

DR501	-	14,730	1,299	1600-1700	69.7	9.4	4.0	1.3	0.8	14.8	100.0
DR502	24,495	22,139	1,787	0700-0800	70.9	7.8	2.7	1.0	0.7	16.9	100.0
DR503	12,698	11,241	1,063	1700-1800	71.5	9.4	4.6	2.5	0.6	11.3	100.0
DR504	-	9,639	969	0700-0800	59.9	10.9	3.3	0.6	0.3	25.0	100.0

District : TANAH MERAH

DR601	-	15,965	1,443	1700-1800	66.9	10.2	5.9	4.0	0.4	12.5	100.0
DR602	-	11,054	1,120	0700-0800	64.2	9.3	8.1	4.0	0.6	13.9	100.0
DR604	-	18,552	1,888	0700-0800	65.0	7.3	4.3	1.7	0.6	21.2	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kelantan

APRIL 2016

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	Busses	Motorcycles	Total
DR603	-	6,135	506	1600-1700	58.5	12.7	6.7	6.1	0.8	15.2	100.0
DR605	-	6,955	603	1300-1400	57.3	12.7	4.7	3.3	0.4	21.6	100.0

District : TUMPAT

DR701	-	27,617	2,419	1800-1900	61.6	5.7	2.6	0.2	0.1	29.7	100.0
DR702	-	14,584	1,933	0700-0800	57.4	7.7	3.4	0.3	0.7	30.6	100.0
DR703	-	25,363	2,784	0700-0800	61.7	6.6	1.8	0.2	0.2	29.5	100.0

District : KUALA KRAI

DR801	-	10,008	842	1700-1800	52.2	20.9	8.4	5.6	1.1	11.8	100.0
DR802	24,477	21,741	1,989	1700-1800	58.8	15.8	6.0	2.4	0.7	16.3	100.0

District : GUA MUSANG

DR901	-	5,922	509	1800-1900	51.6	21.4	6.2	6.1	0.9	13.7	100.0
DR902	-	9,676	807	1900-2000	49.6	24.7	8.1	5.6	0.9	11.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kelantan

OCTOBER 2016

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	Busses	Motorcycles	Total
DR101	-	20,318	1,842	1800-1900	54.5	9.0	3.1	0.3	0.3	32.8	100.0
DR102	-	26,320	2,521	1400-1500	50.9	12.9	6.8	0.8	0.8	27.8	100.0

District : KOTA BHARU

DR201	-	25,518	2,654	0700-0800	68.8	5.3	3.7	1.4	0.7	20.2	100.0
DR202	-	43,519	3,425	1700-1800	67.6	3.7	1.4	0.4	6.4	20.6	100.0
DR203	-	15,143	1,643	1700-1800	53.6	3.2	1.0	0.5	13.8	27.8	100.0
DR204	-	36,241	3,338	1500-1600	78.0	2.5	0.9	0.2	0.4	18.0	100.0
DR205	-	66,209	5,774	0800-0900	73.0	2.8	0.7	0.1	0.2	23.2	100.0
DR206	-	7,593	722	1700-1800	74.0	3.4	2.3	0.1	1.1	18.9	100.0
DR207	-	35,400	3,100	1700-1800	74.7	3.2	1.7	0.7	0.3	19.4	100.0

District : MACHANG

DR301	-	28,881	2,775	0700-0800	74.9	8.7	4.3	1.3	0.6	10.2	100.0
DR302	-	20,541	1,786	1700-1800	72.3	9.4	4.3	2.9	0.5	10.5	100.0

District : PASIR MAS

DR401	-	23,249	2,095	1700-1800	69.8	9.0	4.0	1.0	0.8	15.3	100.0
DR402	-	18,210	1,907	1700-1800	63.3	8.8	2.4	0.3	0.4	24.8	100.0
DR403	20,787	18,990	1,677	0700-0800	68.3	7.0	7.1	0.5	0.7	16.4	100.0
DR404	-	12,307	1,229	1700-1800	57.3	6.5	2.9	0.3	0.1	32.8	100.0
DR405	-	18,594	2,156	1700-1800	65.5	9.3	9.1	1.3	0.1	14.7	100.0

District : PASIR PUTEH

DR501	-	14,395	1,238	1400-1500	64.7	12.4	5.1	1.2	1.3	15.4	100.0
DR502	25,457	23,025	2,340	1700-1800	72.5	8.5	2.5	0.7	0.5	15.3	100.0
DR503	12,629	11,297	1,094	1700-1800	73.7	7.5	5.3	2.3	0.9	10.3	100.0
DR504	-	10,079	895	0700-0800	62.4	9.7	5.1	0.4	0.2	22.2	100.0

District : TANAH MERAH

DR601	-	24,838	2,407	1400-1500	64.9	12.1	5.8	3.4	0.4	13.3	100.0
DR602	-	11,266	1,082	1400-1500	65.8	10.1	6.6	3.4	0.7	13.5	100.0
DR604	-	17,465	1,672	1700-1800	70.3	5.9	4.8	1.1	0.5	17.4	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kelantan

OCTOBER 2016

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	Busses	Motorcycles	Total
DR603	-	6,552	506	1700-1800	62.3	11.7	6.1	4.8	1.0	14.1	100.0
DR605	-	6,762	625	1400-1500	55.8	12.6	5.3	2.4	0.2	23.7	100.0

District : TUMPAT

DR701	-	31,511	3,278	0700-0800	68.1	6.8	2.2	0.2	0.1	22.5	100.0
DR702	-	16,666	2,054	1700-1800	63.4	5.7	3.1	0.6	0.5	26.7	100.0
DR703	-	25,455	2,392	0700-0800	60.3	5.5	2.2	0.2	0.2	31.5	100.0

District : KUALA KRAI

DR801	-	10,620	1,012	1700-1800	62.0	18.9	6.1	3.6	0.9	8.5	100.0
DR802	24,732	22,197	1,803	1700-1800	59.8	15.6	6.1	2.4	0.7	15.4	100.0

District : GUA MUSANG

DR901	-	8,518	736	1700-1800	51.2	21.1	5.8	4.4	1.3	16.1	100.0
DR902	-	11,362	1,010	1400-1500	52.1	22.0	8.4	6.4	0.9	10.1	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kelantan

AVERAGE 2016

District : BACHOK

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
DR101	19,173	1,860	55.3	8.2	3.3	0.5	0.3	32.5	F	R	
DR102	23,351	2,359	55.0	11.0	5.7	0.9	0.8	26.6	F	R	

District : KOTA BHARU

DR201	39,257	3,604	68.0	5.7	4.7	1.4	0.6	19.8	C	-
DR202	49,541	3,811	71.2	3.3	1.3	0.3	3.4	20.4	A	-
DR203	30,010	2,412	65.3	3.6	0.9	0.4	7.2	22.7	F	R
DR204	26,937	3,242	75.5	3.7	1.0	0.3	0.5	19.1	F	R
DR205	56,104	5,524	71.1	3.3	0.8	0.1	0.3	24.4	C	-
DR206	10,390	824	68.9	5.5	3.3	0.3	0.9	21.1	A	2053
DR207	32,210	3,525	71.4	2.8	1.4	0.7	0.3	23.3	F	R

District : MACHANG

DR301	28,778	2,758	75.1	8.4	3.8	1.3	0.5	10.8	A	2039
DR302	15,393	1,371	71.1	10.6	4.2	2.9	0.5	10.8	D	2027

District : PASIR MAS

DR401	21,579	1,906	71.4	8.0	3.5	1.0	0.8	15.2	E	2017
DR402	18,313	1,869	66.7	6.4	2.4	0.3	0.6	23.7	C	2034
DR403	19,965	1,732	66.8	6.7	8.1	0.6	0.7	17.2	E	2017
DR404	13,435	1,291	57.6	5.1	3.3	0.4	0.2	33.4	B	2033
DR405	17,466	1,883	69.7	6.5	8.1	1.0	0.1	14.6	A	2059

District : PASIR PUTEH

DR501	14,563	1,269	67.2	10.9	4.5	1.2	1.0	15.1	C	-
DR502	22,582	2,063	71.7	8.2	2.6	0.9	0.6	16.1	D	2023
DR503	11,269	1,079	72.6	8.4	4.9	2.4	0.8	10.8	A	2055
DR504	9,859	932	61.1	10.3	4.2	0.5	0.3	23.6	A	-

District : TANAH MERAH

DR601	20,402	1,925	65.9	11.2	5.9	3.7	0.4	12.9	F	R
DR602	11,160	1,101	65.0	9.7	7.3	3.7	0.6	13.7	B	2032
DR604	18,009	1,780	67.6	6.6	4.5	1.4	0.6	19.3	E	2026

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Kelantan

AVERAGE 2016

District : JELI

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
DR603	6,344	506	60.4	12.2	6.4	5.4	0.9	14.7	A	2097	
DR605	6,859	614	56.6	12.6	5.0	2.8	0.3	22.7	A	2043	

District : TUMPAT

DR701	29,564	2,849	64.8	6.3	2.4	0.2	0.1	26.1	F	R
DR702	15,625	1,994	60.4	6.7	3.2	0.4	0.6	28.6	E	2018
DR703	25,409	2,588	61.0	6.0	2.0	0.2	0.2	30.5	F	R

District : KUALA KRAI

DR801	10,314	927	57.1	19.9	7.3	4.6	1.0	10.1	B	2056
DR802	21,969	1,896	59.3	15.7	6.1	2.4	0.7	15.8	F	R

District : GUA MUSANG

DR901	7,220	623	51.4	21.3	6.0	5.3	1.1	14.9	A	-
DR902	10,519	909	50.8	23.4	8.3	6.0	0.9	10.6	C	2024

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Kelantan

District : BACHOK

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
DR101	18,013	19,996	19,231	20,824	12,711	21,889	24,537	22,613	23,149	19,173	2.1	0.12
DR102	12,873	13,738	14,485	17,184	9,386	19,150	21,368	21,284	25,955	23,351	7.9	0.58

District : KOTA BHARU

DR201	35,931	30,698	43,222	31,602	37,939	42,433	32,263	26,043	39,257	28,405	-1.7	0.09
DR202	56,676	43,771	55,608	48,957	57,936	46,291	47,187	46,128	49,541	47,234	-1.2	0.15
DR203	36,869	40,224	29,167	33,260	41,274	35,356	35,119	27,703	30,010	21,304	-4.4	0.45
DR204	33,397	36,175	42,681	31,934	37,301	38,669	34,111	32,932	26,937	31,981	-2.1	0.26
DR205	54,808	61,525	51,299	52,560	51,363	51,770	43,734	47,241	56,104	58,061	-0.7	0.04
DR206	7,758	8,195	6,867	7,246	8,991	9,667	7,232	8,641	10,390	8,565	2.3	0.27
DR207	27,826	30,799	31,822	30,154	29,824	44,473	39,093	33,763	32,210	39,188	3.0	0.36

District : MACHANG

DR301	21,624	22,157	22,312	23,023	23,725	24,919	25,688	24,350	25,635	28,778	2.7	0.87
DR302	14,942	15,530	15,731	17,188	18,756	19,101	18,465	19,002	19,286	15,393	1.8	0.27

District : PASIR MAS

DR401	17,418	17,128	17,359	18,193	19,270	19,442	19,632	19,418	19,526	21,579	2.2	0.86
DR402	15,408	18,138	17,275	17,028	16,438	17,614	16,311	19,292	18,965	18,313	1.4	0.37
DR403	17,776	19,197	20,585	18,873	18,831	20,095	20,824	19,831	20,522	19,965	1.0	0.39
DR404	9,892	11,793	14,464	11,604	11,588	11,990	12,011	13,894	13,910	13,435	2.3	0.37
DR405	14,117	14,562	15,377	18,208	19,876	19,922	17,443	17,896	17,914	17,466	2.4	0.38

District : PASIR PUTEH

DR501	16,676	12,742	19,051	19,240	16,698	15,656	13,970	16,096	17,042	14,563	-0.6	0.02
DR502	18,332	20,388	19,685	24,831	23,795	21,093	23,781	22,035	22,608	22,582	1.8	0.32
DR503	9,117	9,066	9,677	12,369	13,133	10,300	11,331	10,430	10,577	11,269	1.7	0.18
DR504	12,085	11,069	14,673	16,304	14,365	13,323	14,814	12,432	10,152	9,859	-2.2	0.15

District : TANAH MERAH

DR601	12,953	13,799	13,398	14,380	14,516	15,713	14,768	15,124	15,789	20,402	3.5	0.76
DR602	8,937	8,614	8,856	9,260	9,901	10,177	9,871	10,216	10,474	11,160	2.6	0.89
DR604	16,297	15,459	18,686	16,643	17,495	17,419	17,313	18,955	15,111	18,009	0.6	0.08

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Kelantan

District : JELI

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
DR603	5,090	5,224	5,296	5,440	5,863	6,275	6,029	6,141	4,718	6,344	1.5	0.19
DR605	4,978	5,350	2,659	5,837	5,375	6,748	5,940	6,342	4,735	6,859	4.0	0.20

District : TUMPAT

DR701	21,888	23,870	22,099	25,635	28,666	29,956	27,868	29,532	31,640	29,564	3.9	0.79
DR702	12,637	12,383	13,194	12,664	13,051	15,143	13,922	17,340	15,597	15,625	3.2	0.72
DR703	17,129	17,522	18,706	19,189	21,622	22,243	26,287	22,655	24,422	25,409	4.7	0.86

District : KUALA KRAI

DR801	11,345	9,132	8,974	10,122	10,565	9,995	10,783	11,860	9,685	10,314	0.7	0.05
DR802	18,828	18,707	19,521	20,623	22,308	23,381	21,200	22,523	23,345	21,969	2.3	0.68

District : GUA MUSANG

DR901	8,471	5,425	5,596	7,365	7,356	7,082	7,859	7,293	4,898	7,220	-0.4	0.00
DR902	6,567	7,271	7,955	8,842	9,219	8,848	8,688	10,087	9,167	10,519	4.2	0.80

STATISTIC FOR YEAR 2016

State : Kelantan

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

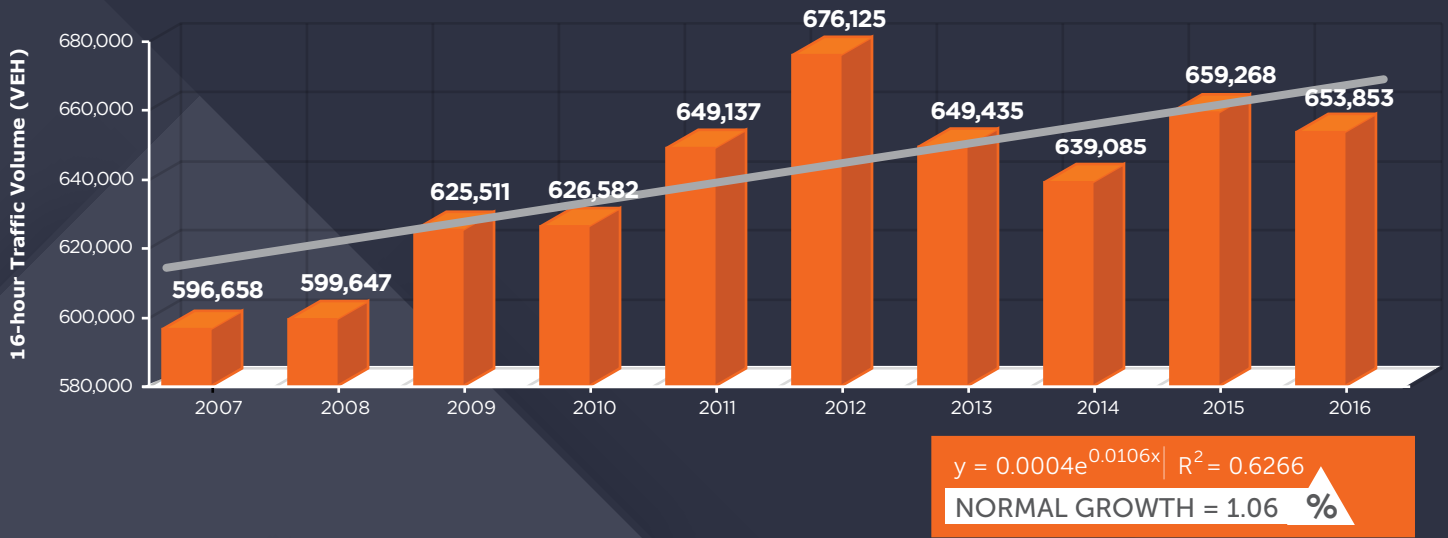




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Terengganu



KELANTAN

The state of Kelantan consists of 32 census stations. The gradual rise is observed since the year 2007 until the year 2012 in the yearly 16-hour traffic volume. The traffic volume has slightly dropped from the year 2013 and 2014. Traffic volume continues to descend by 0.82% for the year 2016 since 2015.



**0.82%
DECREASE**

For the year 2016, the observed traffic growth rate for the state of Kelantan is 1.06%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Kelantan.



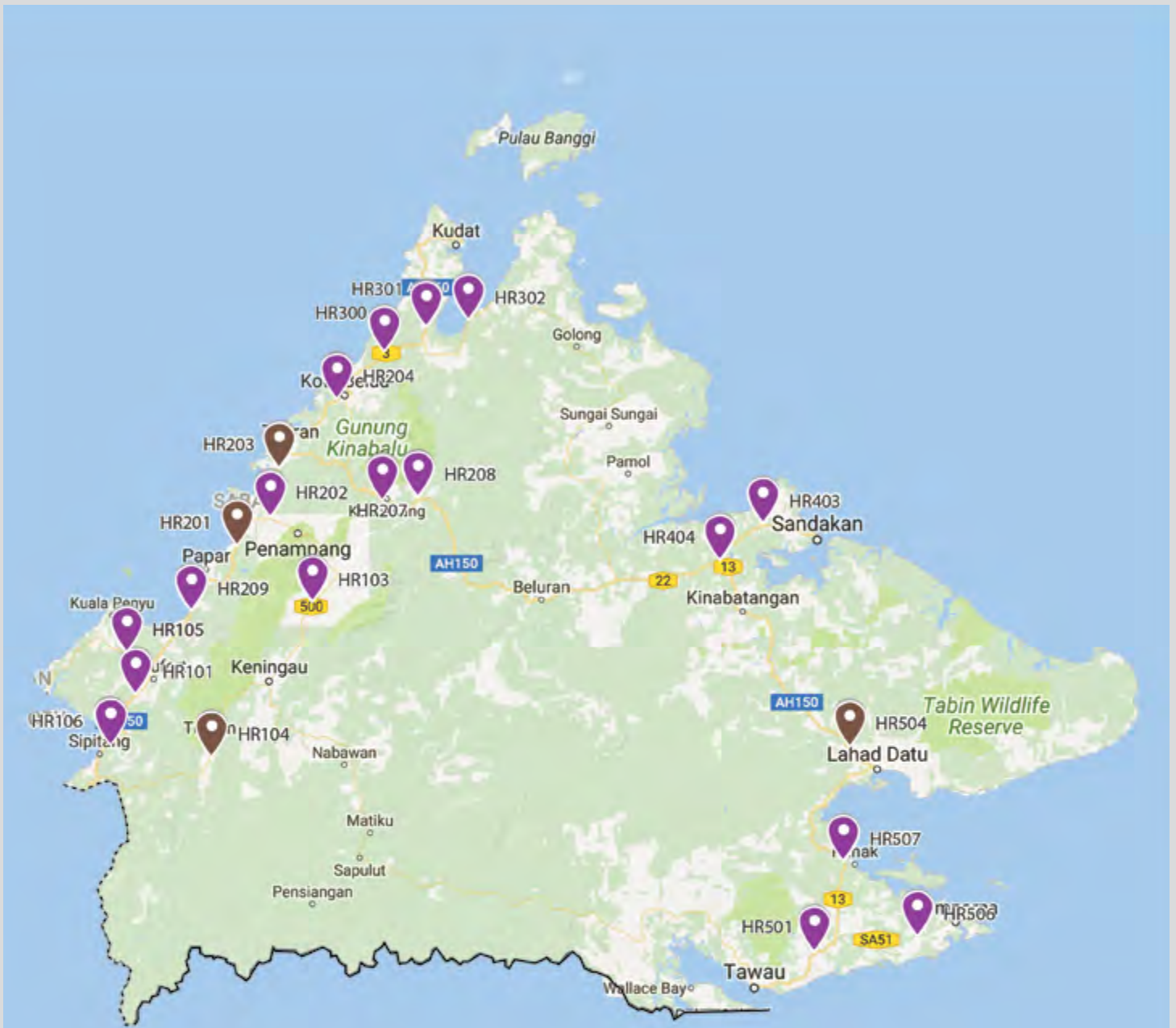
SABAH

SEMBULAN ROUNDABOUT, KOTA KINABALU

- Kota Kinabalu Sabah
- 2016 Roundabout approach volume
48,000 vehicle/ 12-hours
- Traffic Volume Growth 1.7 x in 20 years
 - 23511.63 KM
- Road Facilities Maintenance Division,
JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

State : Sabah



DISTRIBUTION OF SURVEY STATIONS

21
Census
Stations

DISTRICT

DISTRICT	NOS. OF CENSUS STATION
Beaufort	2
Tambunan	1
Tenom	1
Sipitang	1
Papar	2
Penampang	1
Kota Kinabalu	1
Kota Belud	2
Ranau	2
Kota Marudu	2
Sandakan	1
kinabatangan	1
Tawau	1
Semporna	1
Lahad Datu	2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Sabah

District : BEAUFORT

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
HR101	3	1	4.8	Beaufort / Sipitang - Sindumin Road	5.2863889	115.6830556	T 1-1
HR105	3	502	15.0	Klias Kecil - Beaufort Menubuk Highway	5.4322222	115.6463889	T 1-1

District : TAMBUNAN

HR103	3	500	9.0	KK - Sepulut Highway	5.6138889	116.3109444	T 1-1
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District : TENOM

HR104	0	A33	9.0	Tenom - Tomani / Bekuku H'way	5.0631944	115.9507500	T 1-1
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District : SIPITANG

HR106	3	1	133.5	A2, KK / Sindumin (0.5km Mesapol - Sipitang)	5.1095278	115.5865000	T 1-1
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District : PAPAR

HR201	0	1	22.0	Kota Kinabalu - Sindumin (Kg Mook)	5.8148889	116.0442778	T 1-1
HR209	3	1	57.0	Kota Kinabalu - Sindumin (Mandahan)	5.5823333	115.8794444	k 2-2

District : PANAMPANG

HR202	3	500	18.0	A3, KK - Tambunan (8km from A / A31 Intersection)	5.9212778	116.1612500	T 1-1
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District : KOTA KINABALU

HR203	0	1	25.0	Telipok Town	6.0934167	116.1988889	K 2-2
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District : KOTA BELUD

HR204	3	1	69.0	KK - Kudat (Kg Mantanau)	6.3363889	116.4001944	T 1-1
HR300	3	1	105.0	KK - Kudat (Kg. Lentigi)	6.5041389	116.5684167	T 1-1

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Sabah

District : RANAU

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
HR207	3	22	81.0	KK - Sandakan (junction towards Ranau)	5.9812778	116.5621111	T 1-1
HR208	3	22	114.0	KK - Sandakan (after Poring junction)	5.9871111	116.6914444	T 1-1

District : KOTA MARUDU

HR301	3	1	230.6	Kudat - Kota Kinabalu (Batutai)	6.5902778	116.7218889	K 2-2
HR302	3	A12	4.8	Kota Marudu - Pitas (Marasinsim)	6.6139444	116.8713611	K 2-2

District : SANDAKAN

HR403	3	22	25.0	KK - Sandakan (25 km from Sandakan towards KK - (Gum-Gum))	5.8915556	117.9246944	T 1-1
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District : KINABATANGAN

HR404	3	13	54.0	Sandakan - Lahad Datu	5.7631389	117.7717500	T 1-1
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District : TAWAU

HR501	3	13	35.0	Tawau - Sandakan Highway (Near Balung Junction)	4.3666667	118.1055556	T 1-1
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District : SEMPORNA

HR506	3	A51	0.2	Jalan Sing - Sing (18km from Bandar Semporna)	4.4229444	118.4759722	T 1-1
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District : LAHAD DATU

HR504	0	13	14.5	Sg. Segama Crossing	5.1017222	118.2326388	T 1-1
HR507	3	13	81.0	Kunak - Lahad Datu	4.6903611	118.2119444	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sabah

APRIL 2016

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	Busses	Motorcycles	Total
HR101	-	6,522	525	0700-0800	44.7	35.2	7.4	3.3	1.0	8.5	100.0
HR105	-	4,598	376	0700-0800	49.7	28.7	7.6	1.4	1.0	11.5	100.0

District : TAMBUNAN

HR103	-	2,651	230	1700-1800	43.1	29.9	9.5	8.6	0.1	8.9	100.0
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District : TENOM

HR104	6,125	4,231	469	1800-1900	37.5	28.5	10.3	2.5	0.5	20.7	100.0
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District : SIPITANG

HR106	-	8,229	777	1700-1800	51.1	29.1	5.7	2.6	0.4	11.1	100.0
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District : PAPAR

HR201	18,988	17,174	1,405	1800-1900	56.4	27.7	6.3	3.2	0.6	5.8	100.0
HR209	-	15,251	1,291	1800-1900	49.9	26.7	10.2	6.5	1.2	5.6	100.0

District : PENAMPANG

HR202	-	3,444	345	0600-0700	40.4	24.7	11.1	8.5	3.1	12.1	100.0
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District : KOTA KINABALU

HR203	65,749	49,904	5,105	1900-2000	49.5	22.6	13.6	6.3	1.2	6.8	100.0
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District : KOTA BELUD

HR204	-	13,822	1,540	1700-1800	46.8	31.6	9.6	4.1	1.5	6.4	100.0
HR300	-	5,742	550	0900-1000	41.2	42.3	9.6	2.9	0.2	3.8	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sabah

APRIL 2016

District : RANAU

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
HR207	-	4,108	366	1500-1600	35.3	41.9	12.6	6.1	1.8	2.4	100.0
HR208	-	3,876	388	0800-0900	37.0	39.3	10.2	8.3	1.0	4.2	100.0

District : KOTA MARUDU

HR301	-	4,121	356	1600-1700	37.5	41.9	8.5	3.4	0.3	8.5	100.0
HR302	-	4,034	393	0700-0800	43.9	39.5	5.8	2.3	0.2	8.4	100.0

District : SANDAKAN

HR403	-	14,899	1,188	0700-0800	41.0	30.9	13.3	9.1	1.8	4.0	100.0
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District : KINABATANGAN

HR404	-	5,276	540	1600-1700	26.9	43.4	11.6	14.6	0.8	2.7	100.0
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District : TAWAU

HR501	-	14,364	1,386	1200-1300	35.1	33.0	12.8	7.0	0.5	11.6	100.0
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District : SEMPORNA

HR506	-	3,265	282	1300-1400	39.0	43.4	11.3	2.5	0.1	3.7	100.0
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District : LAHAT DATU

HR504	-	7,688	785	1400-1500	47.3	22.4	9.7	9.5	5.5	5.5	100.0
HR507	-	7,688	785	1400-1500	47.3	22.4	9.7	9.5	5.5	5.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sabah

OCTOBER 2016

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	Busses	Motorcycles	Total
HR101	-	6,463	594	1700-1800	45.7	33.8	7.7	2.8	0.4	9.6	100.0
HR105	-	4,523	427	1300-1400	47.6	31.2	6.7	1.9	1.0	11.7	100.0

District : TAMBUNAN

HR103	-	2,912	265	1300-1400	47.1	23.3	12.7	8.9	0.0	8.0	100.0
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District : TENOM

HR104	11,800	9,655	804	1800-1900	34.1	25.3	18.2	4.6	0.7	17.1	100.0
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District : SIPITANG

HR106	-	7,371	669	1300-1400	55.1	26.2	6.0	2.4	0.4	10.0	100.0
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District : PAPAR

HR201	16,406	14,823	1,360	1800-1900	55.3	27.1	7.1	3.5	0.9	6.1	100.0
HR209	-	10,418	823	1700-1800	54.3	28.2	6.7	3.0	0.7	7.1	100.0

District : PENAMPANG

HR202	-	3,257	353	0600-0700	44.8	23.5	10.6	6.8	2.2	12.1	100.0
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District : KOTA KINABALU

HR203	67,616	53,060	5,944	1900-2000	47.5	24.9	14.0	6.0	1.1	6.6	100.0
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District : KOTA BELUD

HR204	-	13,952	1,221	1800-1900	46.4	30.8	8.6	5.1	1.8	7.4	100.0
HR300	-	5,510	501	0700-0800	41.4	39.9	9.1	4.4	0.2	5.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sabah

OCTOBER 2016

District : RANAU

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
HR207	-	4,114	385	1700-1800	38.6	38.3	11.9	7.5	1.5	2.2	100.0
HR208	-	4,003	410	1500-1600	38.3	39.4	10.3	7.0	1.3	3.7	100.0

District : KOTA MARUDU

HR301	-	4,466	424	1700-1800	36.6	41.4	8.9	3.4	0.3	9.3	100.0
HR302	-	4,594	396	0600-0700	39.1	41.9	6.0	4.3	0.0	8.6	100.0

District : SANDAKAN

HR403	-	19,910	1,714	1200-1300	37.0	29.1	15.8	12.5	1.9	3.7	100.0
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District : KINABATANGAN

HR404	-	4,871	431	1700-1800	29.7	41.1	11.6	14.2	1.0	2.4	100.0
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District : TAWAU

HR501	-	9,024	761	1200-1300	31.3	39.7	12.3	8.1	0.6	7.9	100.0
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District : SEMPORNA

HR506	-	3,952	373	1200-1300	43.7	37.9	12.0	3.1	0.1	3.2	100.0
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District : LAHAT DATU

HR504	-	7,882	7,137	1300-1400	24.5	46.5	10.4	10.9	0.6	7.1	100.0
HR507	-	-	8,649	1600-1700	43.6	25.2	13.1	8.9	4.3	5.0	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sabah

AVERAGE 2016

District : BEAUFORT

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
HR101	6,493	560	45.2	34.5	7.5	3.0	0.7	9.0	100%	A	-
HR105	4,561	402	48.6	29.9	7.1	1.7	1.0	11.6	100%	A	2151

District : TAMBUNAN

HR103	2,782	248	45.1	26.6	11.1	8.7	0.1	8.4	100%	A	2127
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District : TENOM

HR104	6,943	637	35.8	26.9	14.3	3.5	0.6	18.9	100%	A	-
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District : SIPITANG

HR106	7,800	723	53.1	27.7	5.9	2.5	0.4	10.5	100%	A	2028
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District : PAPAR

HR201	15,999	1,383	55.9	27.4	6.7	3.4	0.8	6.0	100%	E	2017
HR209	5,855	1,057	52.1	27.4	8.4	4.7	1.0	6.3	100%	A	2045

District : PENAMPANG

HR202	3,351	349	42.6	24.1	10.8	7.7	2.6	12.1	100%	A	-
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District : KOTA KINABALU

HR203	51,482	5,524	48.5	23.8	13.8	6.2	1.2	6.7	100%	F	R
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District : KOTA BELUD

HR204	13,887	1,381	46.6	31.2	9.1	4.6	1.6	6.9	100%	F	R
HR300	5,626	526	41.3	41.1	9.4	3.6	0.2	4.4	100%	A	2042

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Sabah

AVERAGE 2016

District : RANAU

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
HR207	4,111	376	36.9	40.1	12.2	6.8	1.6	2.3	100%	A	2068
HR208	3,940	399	37.6	39.4	10.2	7.6	1.2	4.0	100%	A	2030

District : KOTA MARUDU

HR301	4,294	390	37.1	41.7	8.7	3.4	0.3	8.9	100%	A	2107
HR302	4,314	395	41.5	40.7	5.9	3.3	0.1	8.5	100%	A	2235

District : SANDAKAN

HR403	17,405	1,451	39.0	30.0	14.5	10.8	1.9	3.8	100%	F	R
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District : KINABATANGAN

HR404	5,074	486	28.3	42.3	11.6	14.4	0.9	2.5	100%	A	-
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District : TAWAU

HR501	11,694	1,074	33.2	36.4	12.6	7.6	0.5	9.8	100%	E	-
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District : SEMPORNA

HR506	3,609	328	41.4	40.6	11.6	2.8	0.1	3.5	100%	A	2156
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District : LAHAD DATU

HR504	7,412	707	35.9	34.5	10.1	10.2	3.1	6.3	100%	B	2061
HR507	8,169	821	45.4	23.8	11.4	9.2	4.9	5.2	100%	C	-

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Sabah

District : BEAUFORT

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
HR101	10,773	7,454	4,811	4,924	5,965	5,422	5,694	6,508	6,710	6,493	-2.1	0.07
HR105	4,551	5,181	3,818	3,941	5,457	4,550	4,254	4,566	4,759	4,561	0.2	0.00

District : TAMBUNAN

HR103	2,282	3,048	2,454	2,739	3,000	3,171	2,938	3,018	2,792	2,782	1.5	0.19
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District : TENOM

HR104	3,879	4,566	4,566	4,294	4,425	2,123	2,450	2,378	2,299	6,943	-3.2	0.06
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District : SIPITANG

HR106	5,240	5,403	6,112	6,441	6,626	5,914	7,585	11,392	10,093	7,800	6.9	0.67
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District : PAPAR

HR201	4,932	6,453	7,968	9,370	11,791	14,491	14,406	15,329	15,786	15,999	13.1	0.89
HR209	4,639	3,859	5,932	5,561	6,992	6,249	5,778	8,301	7,408	5,855	5.1	0.48

District : PENAMPANG

HR202	4,685	3,578	3,701	3,835	3,881	3,353	3,839	4,478	4,105	3,351	-0.8	0.04
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District : KOTA KINABALU

HR203	22,232	27,288	25,247	30,288	35,489	39,394	42,886	43,647	47,846	51,482	9.3	0.96
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District : KOTA BELUD

HR204	11,695	9,855	9,450	11,189	11,138	9,953	13,909	11,923	12,388	13,887	2.9	0.44
HR300	3,569	4,429	5,449	6,367	5,029	4,777	6,369	5,084	5,659	5,626	3.3	0.32

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Sabah

District : RANAU

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
HR207	3,482	3,425	3,488	3,732	4,745	5,021	3,813	4,103	3,947	4,111	2.1	0.24
HR208	2,279	2,618	2,396	2,705	3,498	3,872	2,924	3,413	6,833	3,940	8.3	0.61

District : KOTA MURUDU

HR301	4,518	4,184	5,062	5,023	6,180	6,381	7,838	8,258	4,731	4,294	2.6	0.10
HR302	3,630	6,525	3,830	4,277	4,578	5,533	6,481	6,586	3,697	4,314	1.0	0.02

District : SANDAKAN

HR403	9,800	9,207	12,285	16,610	14,321	14,845	15,097	14,975	18,232	17,405	6.5	0.72
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District : KINABATANGAN

HR404	4,376	12,504	16,088	16,831	13,029	6,049	8,022	6,746	5,336	5,074	-7.3	0.19
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District : TAWAU

HR501	17,009	16,860	9,407	10,074	10,035	10,455	10,327	10,229	11,508	11,694	-3.3	0.22
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District : SEMPORNA

HR506	3,231	2,485	2,663	2,711	3,074	2,742	2,704	3,087	2,310	3,609	0.7	0.02
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District : LAHAD DATU

HR504	7,423	6,987	6,781	8,294	8,691	7,641	9,407	8,739	6,335	7,412	0.5	0.01
HR507	8,170	7,168	8,600	11,141	11,633	9,706	7,831	7,699	6,700	8,169	-1.4	0.05

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Sabah

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)



Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Sabah



In the state of Sabah, there are 21 census stations. The yearly 16-hour traffic volume documented shows a decline in traffic volume for the years 2009 and year 2012. The highest number of traffic volume was in 2016 which was upturned from 2015 by 2.81% equals to 5,326 vehicles.

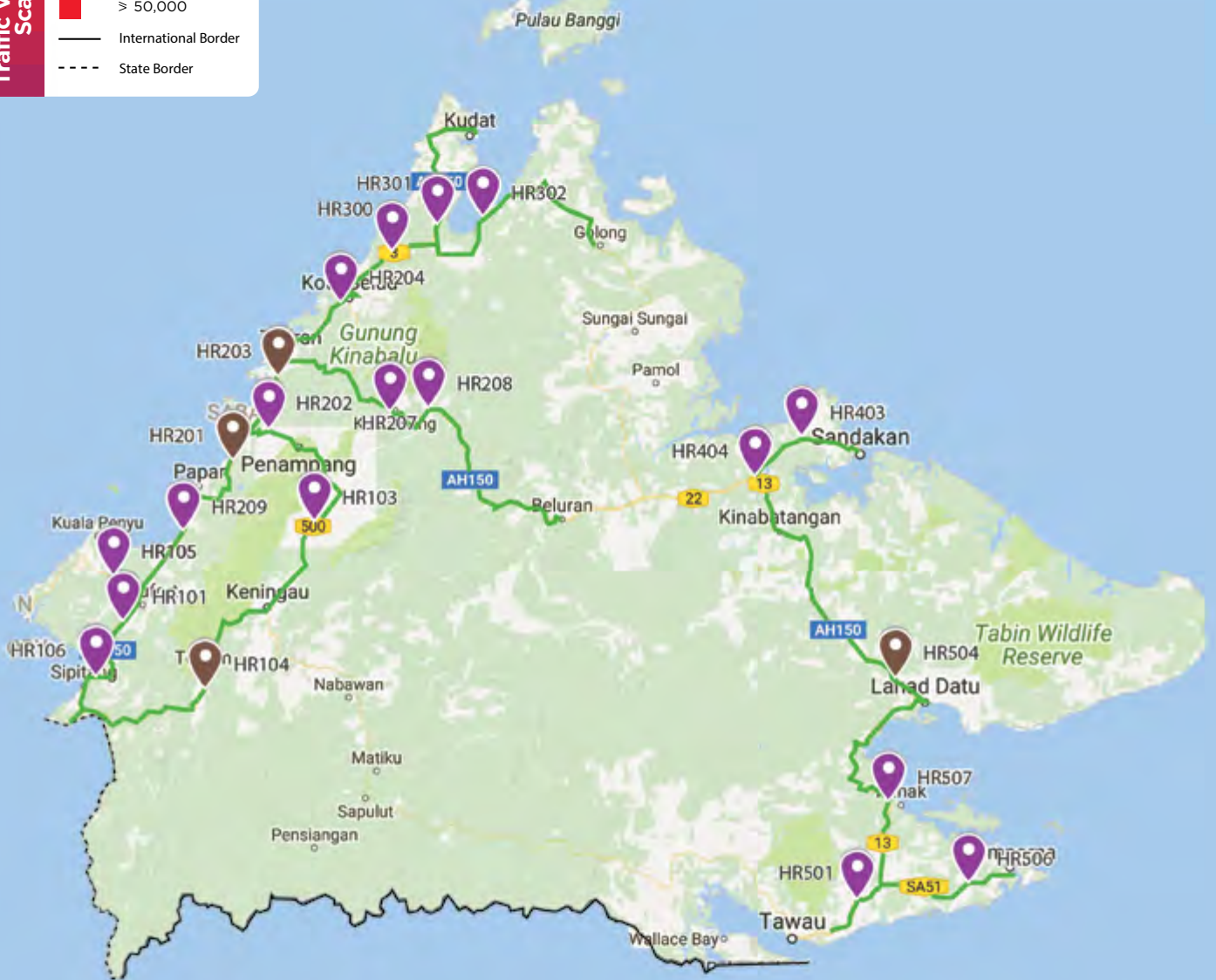
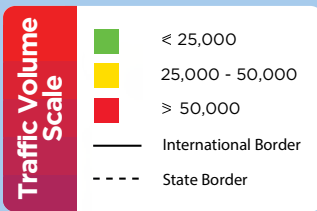


2.81%
Increase

For the year 2016, the observed traffic growth rate for the state of Sabah is 3.45%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Sabah.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Sabah





W. P. LABUAN






**THERMAL OXIDATION PLANT (TOP) ROAD,
W.P. LABUAN**

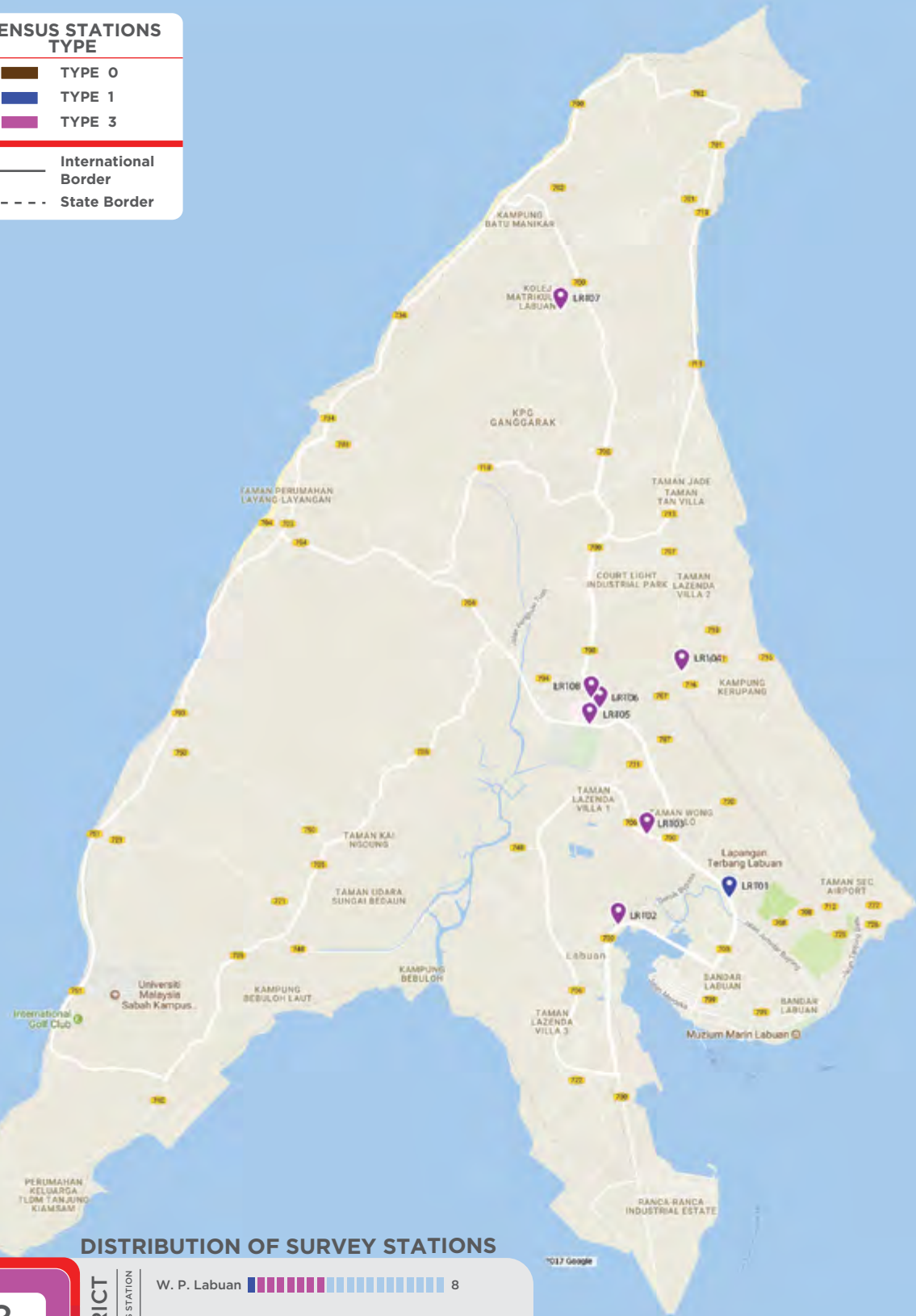
- W. P. Labuan
- 2012
- Champion of the Best Construction Management Award 2012 for Conventional Project Infrastructure Category
- 204.32 KM
- Road Facilities Maintenance Division, JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP



State : W. P. Labuan

LEGEND

CENSUS STATIONS TYPE	
	TYPE 0
	TYPE 1
	TYPE 3
	International Border
	State Border



DISTRIBUTION OF SURVEY STATIONS

 <p>8 Census Stations</p>	<p>DISTRICT</p> <p>NOS. OF CENSUS STATION</p>	<p>W. P. Labuan</p>  <p>8</p>
		<p>7</p> <p>1</p>

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : W. P. Labuan

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
LR101	1	L700	1.5	Jalan Tun Mustapha (1.5km from town)	5.2898889	115.2475556	K 3-3
LR102	3	L700	1.4	Jalan Patau – Patau (1.4km from Jalan Tun Mustapha / Jalan Ranza – Ranza junction)	5.2865000	115.2345278	K 2-2
LR103	3	L706	0.3	Jalan Ranza – Ranza (0.3km from Tun Mustapha / Jalan Ranza – Ranza junction)	5.2970833	115.2377222	T 1-1
LR104	3	L707	0.9	Jalan Pulau Buah (0.9km from Jalan Pulau Buah / Jalan Tun Mustapha signalized junction)	5.3160556	115.2420556	T 1-1
LR105	3	L704	0.3	Jalan Mohamad Salleh (0.3km from Jalan Pohon Batu / Jalan Mohamad Salleh / Jalan Tun Mustapha junction)	5.3097222	115.2313611	T 1-1
LR106	3	L700	0.3	Jalan Pohon Batu (0.3km from Pohon Batu / Jalan Mohamad Salleh / Jalan Tun Mustapha junction)	5.3117500	115.2324167	K 2-2
LR107	3	L703	0.3	Jalan OKK Daud (0.3km from Jalan OKK Daud / Jalan Pohon Batu junction)	5.3579722	115.2279444	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : W. P. Labuan

APRIL 2016

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
LR101	-	48,289	3,773	1700-1800	69.6	13.4	4.7	0.7	0.4	11.3	100.0
LR102	-	32,756	3,090	0700-0800	55.2	17.2	8.5	2.0	0.2	17.0	100.0
LR103	-	16,003	1,515	1700-1800	67.4	14.0	6.6	0.7	0.2	11.1	100.0
LR104	-	13,404	1,391	0700-0800	64.7	19.3	3.9	1.1	0.1	11.0	100.0
LR105	-	22,035	2,213	1700-1800	63.6	11.9	5.7	1.2	0.2	17.4	100.0
LR106	-	24,603	2,648	0600-0700	59.9	16.5	6.1	1.0	0.2	16.3	100.0
LR107	-	3,912	425	0700-0800	59.0	17.0	5.9	2.2	0.3	15.6	100.0
LR108	-	8,830	1,556	0600-0700	52.9	16.2	7.0	1.0	0.3	22.5	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : W. P. Labuan

OCTOBER 2016

Census Station Number	24-hour Traffic	16-hour Traffic	Peak Hour		Traffic Composition (%)						
			Traffic	Time	Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total
LR101	-	41,445	3,438	1700-1800	72.4	12.4	3.3	0.4	0.4	11.1	100.0
LR102	-	24,765	3,060	1700-1800	61.0	18.2	4.9	1.4	0.5	14.0	100.0
LR103	-	16,370	1,739	1700-1800	62.1	16.5	6.3	1.3	0.7	13.2	100.0
LR104	-	14,232	1,554	0700-0800	66.1	18.5	3.5	0.5	0.6	10.8	100.0
LR105	-	21,896	2,714	1700-1800	64.2	16.0	2.8	1.0	0.4	15.5	100.0
LR106		23,039	2,420	1700-1800	63.0	14.9	4.1	1.0	0.5	16.5	100.0
LR107		3,361	449	1400-1500	59.5	15.6	3.2	0.6	0.9	20.2	100.0
LR108		7,892	968	0600-0700	45.7	20.0	4.6	2.4	0.7	26.5	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : W. P. Labuan

AVERAGE 2016

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
LR101	44,867	3,606	71.0	12.9	4.0	0.5	0.4	11.2	100%	A	2054
LR102	28,761	3,075	58.1	17.7	6.7	1.7	0.4	15.5	100%	B	2020
LR103	16,187	1,627	64.8	15.2	6.4	1.0	0.4	12.2	100%	E	2017
LR104	13,818	1,473	65.4	18.9	3.7	0.8	0.3	10.9	100%	C	2025
LR105	21,966	2,464	63.9	13.9	4.3	1.1	0.3	16.5	100%	F	R
LR106	23,821	2,534	61.5	15.7	5.1	1.0	0.4	16.4	100%	A	2036
LR107	3,637	437	59.3	16.3	4.6	1.4	0.6	17.9	100%	A	2033
LR108	8,361	1,262	49.3	18.1	5.8	1.7	0.5	24.5	100%	C	2028

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : W. P. Labuan

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
LR101	39,336	39,218	37,854	38,889	37,905	48,329	45,086	45,523	47,872	44,867	2.5	0.60
LR102	14,494	14,489	11,148	12,162	18,000	18,215	27,587	29,543	29,675	28,761	11.2	0.78
LR103	9,561	9,183	9,225	9,045	13,533	13,740	13,764	14,396	15,002	16,187	7.1	0.83
LR104	10,840	12,080	10,314	10,562	10,102	10,913	13,462	13,687	12,995	13,818	3.0	0.52
LR105	10,836	25,713	12,303	13,991	16,586	16,656	18,451	20,522	20,428	21,966	4.9	0.31
LR106	19,215	13,143	17,822	19,046	16,920	16,934	19,011	21,458	23,755	23,821	4.2	0.53
LR107	2,508	2,000	1,958	2,388	2,031	4,273	3,682	5,433	3,629	3,637	8.9	0.55
LR108	5,156	15,781	4,491	4,169	5,853	8,446	9,897	8,825	6,439	8,361	2.7	0.04

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : W.P. Labuan

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

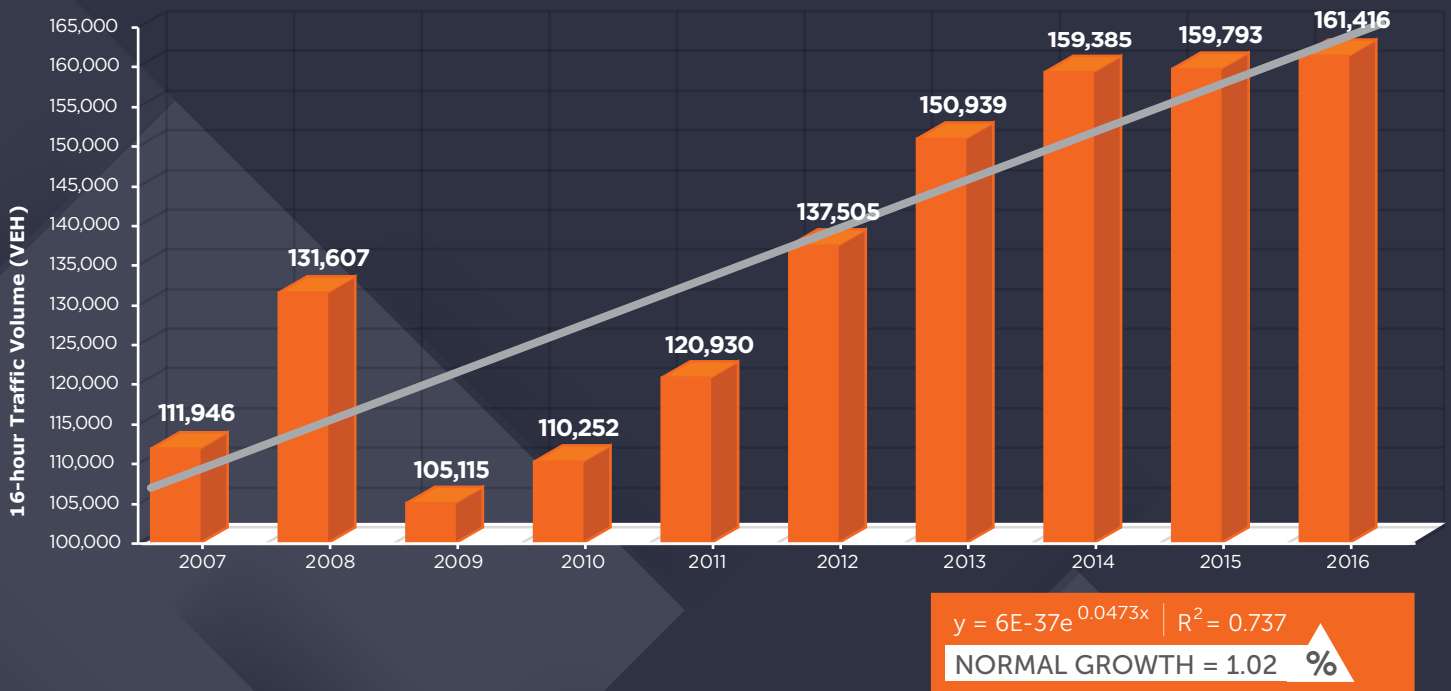




Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in W.P. Labuan



LABUAN

The Federal Territory of Labuan consists of 8 census stations. The 16-hour traffic volume exhibits an increase of traffic volume since the year 2009 until 2016. A rise of 1.02% occurs between the year 2015 and 2016, which is equivalent to 1,623 vehicles in the yearly 16-hour traffic volume.

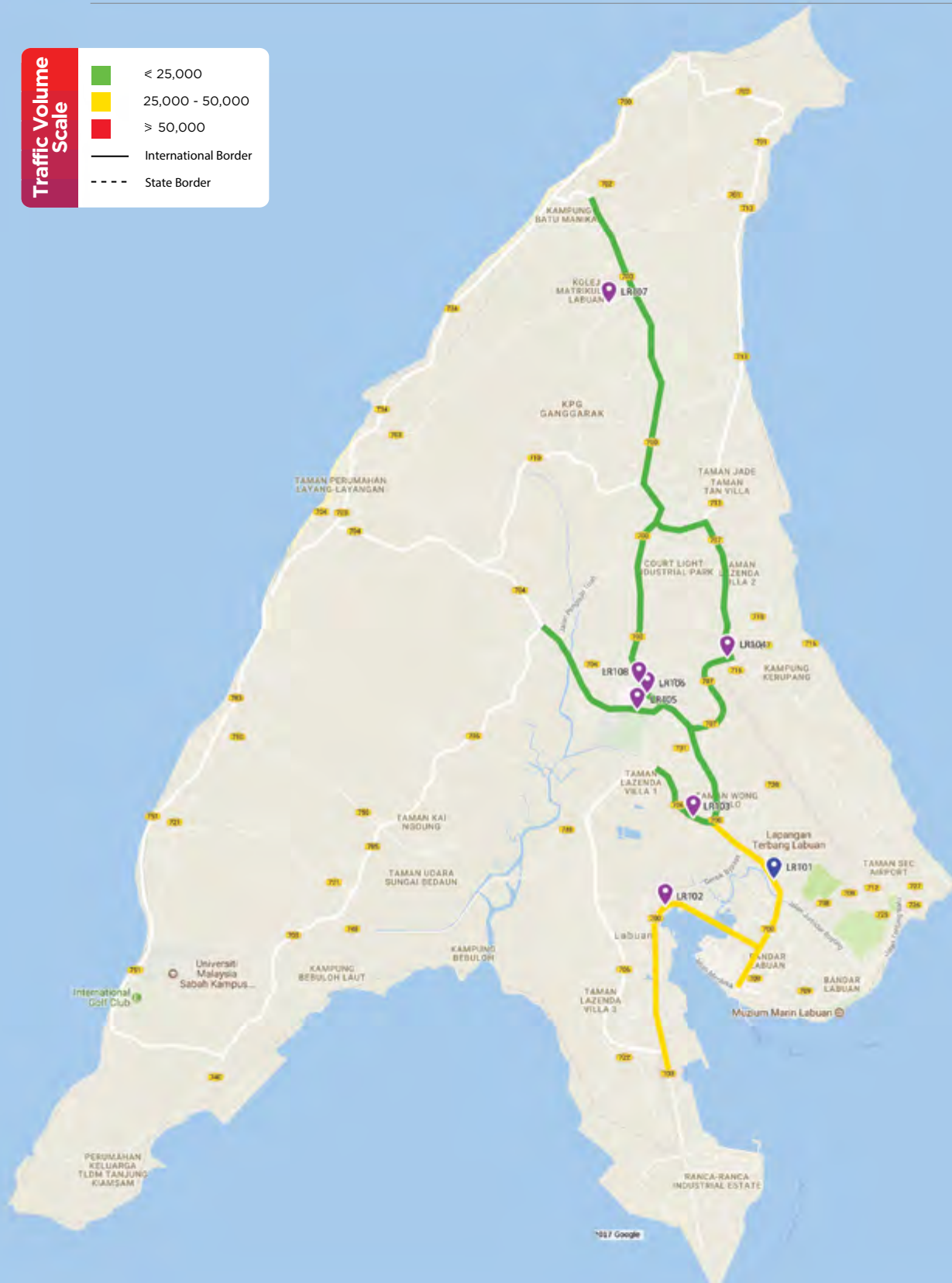
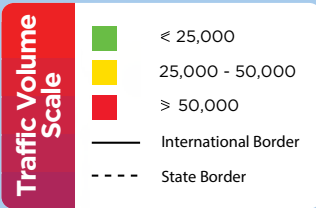


4.73%
Increase

For the year 2016, the observed traffic growth rate for the Federal Territory of Labuan is 4.73%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in The Federal Territory of Labuan.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : W.P. Labuan







SARAWAK

Matang Baru Road

- Kuching Sarawak (Matang)
 - 2016
- Reduces rush hour traffic congestion, from single carriageway to dual carriageway
 - 35516.53 KM
- Road Facilities Maintenance Division, JKR Malaysia 2016

TRAFFIC CENSUS STATION MAP

State : Sarawak

DISTRIBUTION OF SURVEY STATIONS

DISTRICT	NO. OF CENSUS STATION
Kuching	7
Samarahan	3
Sri Aman	3
Betong	1
Sibu	4
Bintulu	3
Miri	4
Limbang	3
Lawas	2
Sarikei	3

33
Census
Stations

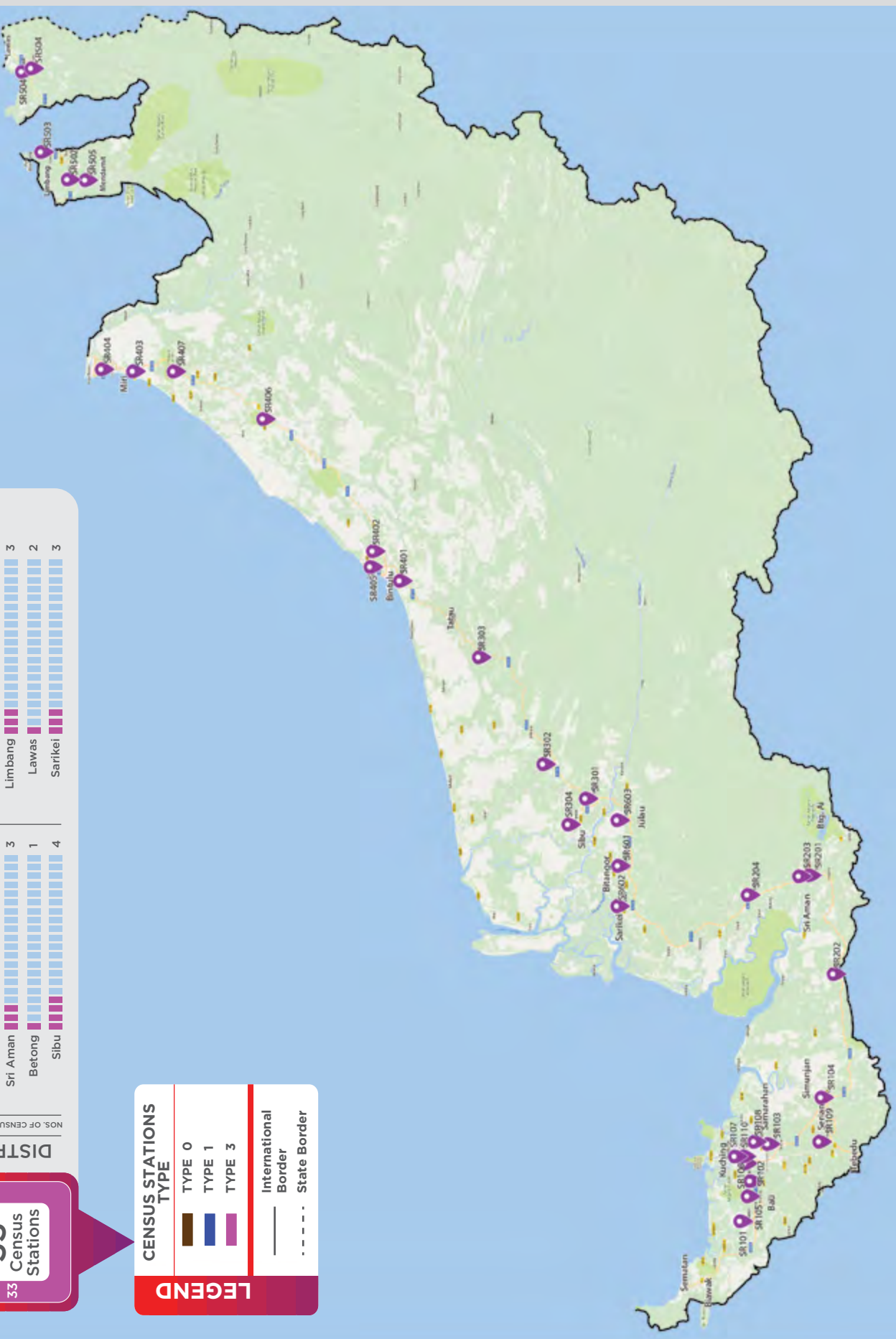
LEGEND

CENSUS STATIONS TYPE

- TYPE 0
- TYPE 1
- TYPE 3

International Border

State Border



LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Sarawak

District : KUCHING

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
SR101	3	1	16.1	Bau - Semantan	1.4882778	110.0408611	T 1-1
SR102	3	Q6	8.1	Bau - Kuching	1.4419167	110.2277500	T 1-1
SR103	3	1	27.4	Kuching - Serian	1.3638889	110.4038889	K 2-2
SR105	3	1	18.8	Bau - Kuching	1.4566389	110.1603333	T 1-1
SR106	3	1	10.5	Kuching - Serian	1.4856389	110.3310556	K 2-2
SR107	3	31	4.5	Kuching Bypass	1.5106111	110.3512500	K 3-3
SR110	3	900	-	Jalan Kuching (Airport Access - between BDC roundabout and airport roundabout)	1.4993056	110.3486111	K 3-3

District : SAMARAHAN

SR104	3	1	83.7	Kuching - Serian	1.1152778	110.6237500	K 2-2
SR108	3	1	10.0	Jalan Datuk Mohamad Musa	1.4541110	110.4096110	T 1-1
SR109	3	21	22.0	Serian - Tebedu	1.1231667	110.4181111	K 2-2

District : SRI AMAN

SR201	3	1	41.9	Sri Aman - Sarikei	1.1722220	111.6596670	T 1-1
SR202	3	1	46.9	Sri Aman - Serian	1.0854167	111.1916111	T 1-1
SR203	3	3	18.5	Batang Ai Road	1.2193056	111.6545833	T 1-1

District : BETONG

SR204	3	1	84.9	Betong - Sarikei (Simpang Jalan Paku)	1.4624444	111.5665556	T 1-1
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District : SIBU

SR301	3	1	9.0	Durin Ferry - Junction to Sibu	2.2081389	112.0151667	K 2-2
SR302	3	1	50.8	Sibu - Junc. to Mukah	2.4331389	112.1672222	K 2-2
SR303	3	1	121.6	Sibu - Tatau	2.7347778	112.6676389	T 1-1
SR304	3	800-10A	10.0	Rejang Port access road	2.2916050	111.8957960	K 2-2

District : BINTULU

SR401	3	1	20.0	Bintulu - Sibu	3.0988333	113.0226667	T 1-1
SR402	3	1	29.0	Bintulu - Miri	3.2264722	113.1610000	T 1-1
SR405	3	36	9.5	Bintulu - Tg. Kidurong	3.2333060	113.0891110	K 2-2

LOCATION DESCRIPTION FOR TRAFFIC CENSUS STATION

State : Sarawak

District : MIRI

Census Station Number	Survey Type	Route Number	KM	Description of Location	GPS Coordinate (WGS84) (Latitude, Longitude)		Type of Carriageway
SR403	3	1	6.2	Miri - Bintulu (before junction to Airport)	4.3380278	114.0000278	K 2-2
SR404	3	22	11.3	Miri - Brunei Border	4.4855556	114.0073611	T 1-1
SR406	3	1	90.2	Miri - Sg. Suai	3.7344444	113.7766389	T 1-1
SR407	3	1	37.4	Miri - Junc. Beluru	4.1448889	114.0043611	T 1-1

District : LIMBANG

SR502	3	22	23.3	Limbang - Brunei Border (Tedungan)	4.6440278	114.8923333	K 2-2
SR503	3	22	1.6	Limbang - Brunei Border (Sg.Padaruan)	4.7624722	115.0217222	K 2-2
SR505	3	Q296	32.2	Limbang - Ukong	4.5586111	114.8873611	K 2-2

District : LAWAS

SR501	3	23	5.6	Lawas - Merapok	4.8090556	115.4097222	T 1-1
SR504	3	23	1.6	Lawas - Trusan	4.8560833	115.3944722	T 1-1

District : SARIKEI

SR601	3	1	29.0	Sarikei - Sibul	2.0597778	111.6934444	T 1-1
SR602	3	1	50.4	Sarikei - Junc. to Bintangor	2.0618611	111.5137500	T 1-1
SR603	3	1	40.3	Bintangor - Durin Ferry	2.0586667	111.9108889	T 1-1

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sarawak

APRIL 2016

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	Busses	Motorcycles	Total
SR101	-	2,758	295	1700-1800	56.9	19.9	6.7	5.8	0.4	10.4	100.0
SR102	-	13,760	1,583	0700-0800	58.2	11.7	5.7	7.8	1.1	15.6	100.0
SR103	-	34,284	3,517	0700-0800	57.2	16.0	4.1	2.5	0.6	19.6	100.0
SR105	-	7,788	757	0700-0800	55.8	18.5	6.8	2.6	0.4	15.8	100.0
SR106	-	60,909	6,222	0700-0800	60.7	15.2	4.5	1.4	0.6	17.6	100.0
SR107	-	82,207	7,914	1600-1700	70.3	14.4	4.0	1.7	0.2	9.3	100.0
SR110	-	62,663	5,825	1700-1800	70.6	13.6	3.8	1.1	0.1	10.8	100.0

District : SAMARAHAN

SR104	-	7,933	786	1200-1300	43.7	21.9	10.8	11.3	2.4	9.9	100.0
SR108	-	25,823	2,300	0700-0800	56.5	12.1	3.7	2.9	0.7	24.1	100.0
SR109	-	4,132	591	1100-1200	31.8	17.4	7.4	3.7	2.6	37.2	100.0

District : SRI AMAN

SR201	-	4,262	377	1500-1600	43.0	28.7	12.7	8.9	1.5	5.1	100.0
SR202	-	3,972	305	1300-1400	45.1	25.3	9.6	12.9	1.9	5.2	100.0
SR203	-	2,308	201	0700-0800	40.8	32.6	7.8	2.7	0.4	15.6	100.0

District : BETONG

SR204	-	4,190	365	1400-1500	46.7	27.5	5.6	12.1	1.7	6.4	100.0
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District : SIBU

SR301	-	21,369	1,669	0800-0900	34.2	20.5	14.4	9.8	1.8	19.3	100.0
SR302	-	3,795	301	1100-1200	31.8	27.9	16.1	17.4	3.7	3.1	100.0
SR303	-	6,001	416	1100-1200	36.3	28.5	15.8	14.3	3.2	1.9	100.0
SR304	-	23,334	2,600	0600-0700	30.7	17.7	15.0	12.8	4.3	19.5	100.0

District : BINTULU

SR401	-	5,819	467	1200-1300	30.9	36.0	7.0	20.8	2.1	3.2	100.0
SR402	-	7,857	694	1700-1800	35.4	39.0	8.5	9.2	1.4	6.4	100.0
SR405	-	22,912	2,279	1700-1800	53.4	28.3	8.8	1.5	1.1	6.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sarawak

APRIL 2016

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	Busses	Motorcycles	Total
SR403	-	9,606	1,017	0700-0800	52.4	21.6	6.2	6.3	1.6	12.0	100.0
SR404	-	9,462	959	0600-0700	48.6	33.5	5.3	3.3	1.8	7.6	100.0
SR406	-	4,832	402	1700-1800	29.6	45.2	4.4	8.7	2.5	9.6	100.0
SR407	-	5,386	530	1600-1700	23.6	32.0	16.0	22.4	1.4	4.6	100.0

District : LIMBANG

SR502	-	4,900	451	1700-1800	66.2	14.6	4.2	5.3	0.8	9.0	100.0
SR503	-	13,093	1,808	0600-0700	50.1	15.6	2.2	1.4	0.6	30.0	100.0
SR505	-	1,693	183	0700-0800	38.7	16.5	16.1	7.7	0.7	20.1	100.0

District : LAWAS

SR501	-	4,983	405	1700-1800	40.6	38.8	6.2	4.5	0.1	9.9	100.0
SR504	-	12,297	1,119	1300-1400	45.9	30.2	5.4	2.3	0.0	16.1	100.0

District : SARIKEI

SR601	-	5,418	854	0600-0700	46.6	21.2	5.0	3.0	0.3	23.8	100.0
SR602	-	2,448	207	1500-1600	38.6	31.9	6.7	12.8	1.7	8.3	100.0
SR603	-	2,033	170	1300-1400	50.9	25.4	5.6	3.6	0.2	14.3	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sarawak

OCTOBER 2016

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	Busses	Motorcycles	Total
SR101	-	4,100	386	1600-1700	46.4	21.4	10.8	8.0	0.5	12.8	100.0
SR102	-	10,174	1,225	0700-0800	55.3	14.1	8.6	6.5	0.7	14.8	100.0
SR103	-	35,615	4,212	0600-0700	53.9	16.5	5.0	5.5	1.0	18.1	100.0
SR105	-	8,052	1,132	1700-1800	58.6	17.1	6.4	3.4	0.4	14.1	100.0
SR106	-	56,731	5,242	1700-1800	57.8	18.3	4.4	1.2	0.6	17.7	100.0
SR107	-	74,637	6,510	1700-1800	63.4	19.1	4.8	2.5	0.2	10.1	100.0
SR110	-	62,802	5,068	0700-0800	65.3	17.2	4.2	2.2	0.2	11.0	100.0

District : SAMARAHAN

SR104	-	10,088	882	1500-1600	53.3	24.4	7.1	6.3	1.2	7.7	100.0
SR108	-	27,262	2,245	1700-1800	60.7	10.7	4.1	2.3	0.5	21.7	100.0
SR109	-	2,103	241	0700-0800	45.2	26.8	9.0	0.7	2.2	16.1	100.0

District : SRI AMAN

SR201	-	4,466	388	1600-1700	43.0	21.3	12.2	13.0	2.2	8.2	100.0
SR202	-	3,460	362	1200-1300	40.0	25.3	9.6	16.0	2.3	6.9	100.0
SR203	-	2,676	258	0800-0900	32.6	30.0	11.2	6.8	0.3	19.2	100.0

District : BETONG

SR204	-	4,105	363	1400-1500	47.5	25.4	5.9	13.6	1.8	5.8	100.0
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District : SIBU

SR301	-	20,668	1,530	1300-1400	32.8	21.7	15.0	10.4	0.3	19.8	100.0
SR302	-	7,221	568	0800-0900	46.9	25.1	12.1	9.4	2.3	4.2	100.0
SR303	-	7,346	639	0700-0800	39.0	22.7	16.5	10.9	2.8	8.1	100.0
SR304	-	26,534	2,363	0600-0700	30.2	19.5	13.9	13.2	5.6	17.6	100.0

District : BINTULU

SR401	-	5,306	440	1300-1400	65.3	3.1	2.7	23.4	2.0	3.6	100.0
SR402	-	6,999	600	1700-1800	49.3	28.0	3.5	9.7	1.4	8.2	100.0
SR405	-	11,022	1,175	1700-1800	54.9	31.0	4.1	2.2	1.0	6.9	100.0

TRAFFIC VOLUME AND 16-HOUR TRAFFIC COMPOSITION

State : Sarawak

OCTOBER 2016

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	Busses	Motorcycles	Total
SR403	-	8,577	868	0700-0800	49.9	24.7	6.4	5.7	1.3	12.1	100.0
SR404	-	8,914	842	1700-1800	49.1	34.0	5.0	2.8	1.7	7.5	100.0
SR406	-	4,467	392	1700-1800	27.2	47.4	4.5	9.6	2.7	8.7	100.0
SR407	-	3,653	311	1400-1500	23.8	36.2	11.3	16.7	3.6	8.3	100.0

District : LIMBANG

SR502	-	5,225	507	1700-1800	64.0	14.5	4.5	6.3	0.8	9.8	100.0
SR503	-	13,396	1,887	0600-0700	49.6	15.6	2.4	1.6	0.6	30.2	100.0
SR505	-	2,106	253	0700-0800	35.5	15.4	15.2	8.5	0.9	24.4	100.0

District : LAWAS

SR501	-	4,807	440	0700-0800	41.5	38.1	7.3	4.0	0.0	9.1	100.0
SR504	-	11,105	1,008	1700-1800	44.2	33.1	3.7	1.9	0.0	17.0	100.0

District : SARIKEI

SR601	-	3,782	375	1300-1400	40.4	31.7	4.9	3.0	0.1	20.0	100.0
SR602	-	2,367	209	1400-1500	32.9	30.0	10.8	16.2	1.3	8.9	100.0
SR603	-	2,819	316	0900-1000	43.4	25.4	13.2	5.9	0.2	11.9	100.0

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Sarawak

AVERAGE 2016

District : KUCHING

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
SR101	3,429	341	51.6	20.6	8.8	6.9	0.4	11.6	100%	A	2066
SR102	11,967	1,404	56.7	12.9	7.2	7.1	0.9	15.2	100%	D	-
SR103	34,950	3,865	55.6	16.2	4.5	4.0	0.8	18.8	100%	C	2022
SR105	7,920	945	57.2	17.8	6.6	3.0	0.4	15.0	100%	A	2034
SR106	58,820	5,732	59.2	16.8	4.5	1.3	0.6	17.6	100%	E	2017
SR107	78,422	7,212	66.9	16.7	4.4	2.1	0.2	9.7	100%	D	2020
SR110	44,963	4,035	65.6	12.2	3.9	1.7	0.3	16.2	100%	A	-

District : SAMARAHAN

SR104	9,011	834	48.5	23.1	9.0	8.8	1.8	8.8	100%	A	2035
SR108	26,543	2,273	58.6	11.4	3.9	2.6	0.6	22.9	100%	F	R
SR109	3,118	416	38.5	22.1	8.2	2.2	2.4	26.7	100%	A	2038

District : SRI AMAN

SR201	4,364	383	43.0	25.0	12.5	11.0	1.8	6.7	100%	A	2048
SR202	3,716	334	42.5	25.3	9.6	14.4	2.1	6.0	100%	A	2045
SR203	2,492	230	36.7	31.3	9.5	4.7	0.3	17.4	100%	A	2043

District : BETONG

SR204	4,148	364	47.1	26.4	5.8	12.8	1.7	6.1	100%	A	2037
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District : SIBU

SR301	21,019	1,600	33.5	21.1	14.7	10.1	1.1	19.5	100%	A	2019
SR302	5,508	435	39.4	26.5	14.1	13.4	3.0	3.6	100%	A	2039
SR303	6,674	528	37.6	25.6	16.2	12.6	3.0	5.0	100%	A	2024
SR304	24,934	2,482	30.5	18.6	14.4	13.0	4.9	18.5	100%	C	-

TRAFFIC VOLUME, 16-HOUR TRAFFIC COMPOSITION AND LOS

State : Sarawak

AVERAGE 2016

District : BINTULU

Census Station Number	16-hour Traffic	Peak Hour Traffic	Traffic Composition (%)							Level of Service (LOS)	Capacity Year
			Cars & Taxis	Vans & Utilities	Medium Lorries	Heavy Lorries	Busses	Motorcycles	Total		
SR401	5,563	454	48.1	19.5	4.8	22.1	2.1	3.4	100%	A	-
SR402	7,428	647	42.4	33.5	6.0	9.4	1.4	7.3	100%	A	2037
SR405	16,967	1,727	54.2	29.6	6.5	1.8	1.0	6.9	100%	A	2037

District : MIRI

SR403	9,092	943	51.1	23.1	6.3	6.0	1.4	12.0	100%	A	2081
SR404	9,188	901	48.8	33.7	5.2	3.1	1.7	7.5	100%	B	2038
SR406	4,650	397	28.4	46.3	4.5	9.1	2.6	9.2	100%	A	2031
SR407	4,520	421	23.7	34.1	13.6	19.5	2.5	6.5	100%	A	-

District : LIMBANG

SR502	5,063	479	65.1	14.5	4.4	5.8	0.8	9.4	100%	A	2209
SR503	13,245	1,848	49.9	15.6	2.3	1.5	0.6	30.1	100%	A	-
SR505	1,900	218	37.1	16.0	15.7	8.1	0.8	22.3	100%	A	2056

District : LAWAS

SR501	4,383	390	40.5	35.2	5.6	3.7	0.1	14.9	100%	A	2050
SR504	11,701	1,064	45.1	31.7	4.6	2.1	0.0	16.5	100%	B	2021

District : SARIKEI

SR601	4,600	615	43.5	26.5	5.0	3.0	0.2	21.9	100%	A	2024
SR602	2,408	208	35.7	31.0	8.7	14.5	1.5	8.6	100%	A	2035
SR603	2,426	243	47.2	25.4	9.4	4.8	0.2	13.1	100%	A	2036

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Sarawak

District : KUCHING

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
SR101	2,779	3,188	3,143	3,091	3,504	5,780	3,512	3,582	4,090	3,429	3.1	0.22
SR102	9,655	14,825	20,595	18,113	21,718	15,568	22,340	19,354	9,461	11,967	-0.7	0.00
SR103	21,071	22,225	24,564	30,616	31,112	32,889	27,987	32,808	34,874	34,950	5.4	0.78
SR105	5,780	5,710	6,496	6,322	6,893	10,032	7,430	7,351	7,621	7,920	3.8	0.48
SR106	41,044	35,994	30,385	40,996	39,562	53,073	68,841	50,640	52,597	58,820	6.2	0.58
SR107	50,491	50,441	37,394	50,352	46,154	42,332	54,475	57,770	60,830	78,422	4.6	0.47
SR110	39,194	44,995	40,554	28,674	34,868	38,175	28,102	31,940	39,016	44,963	-0.6	0.01

District : SAMARAHAN

SR104	4,380	4,187	5,047	5,244	5,608	6,092	11,200	6,440	7,575	9,011	8.6	0.69
SR108	19,177	19,691	26,053	17,594	29,842	21,143	32,729	14,831	24,320	26,543	1.9	0.05
SR109	1,449	1,576	1,618	1,895	1,909	2,043	11,346	2,443	3,104	3,118	11.6	0.34

District : SRI AMAN

SR201	3,269	3,374	4,157	4,216	4,197	4,658	3,776	5,643	4,852	4,364	3.9	0.52
SR202	2,747	2,587	2,632	2,426	2,950	3,264	3,063	3,867	3,545	3,716	4.6	0.75
SR203	1,404	1,613	1,773	1,716	1,914	2,474	2,495	2,302	2,454	2,492	6.5	0.85

District : BETONG

SR204	3,082	3,039	2,727	3,747	4,796	6,231	5,992	4,742	4,716	4,148	6.2	0.43
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District : SIBU

SR301	3,799	1,700	1,353	4,365	4,698	8,827	8,837	14,386	16,523	21,019	27.8	0.81
SR302	3,143	8,072	5,396	3,310	4,471	5,683	7,778	7,280	16,244	5,508	8.6	0.30
SR303	5,883	1,987	2,090	2,726	3,269	4,444	6,557	4,518	5,068	6,674	8.8	0.35
SR304	32,924	34,674	27,969	24,998	23,730	25,254	28,252	28,728	23,860	24,934	-2.8	0.40

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Sarawak

District : BINTULU

Census Station Number	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Normal Growth (%/yr)	R ²
SR401	6,240	7,250	9,808	10,957	14,520	4,342	4,476	5,125	5,841	5,563	-5.9	0.19
SR402	4,771	5,924	7,880	8,507	4,178	5,355	9,139	8,677	7,452	7,428	4.0	0.19
SR405	13,129	15,814	21,873	19,003	36,245	28,603	28,131	28,995	28,352	16,967	5.3	0.24

District : MIRI

SR403	6,882	9,984	11,060	10,506	12,211	11,805	10,865	10,887	12,329	9,092	2.4	0.18
SR404	7,961	11,992	7,633	9,489	10,228	9,248	10,771	10,981	12,329	9,188	2.2	0.17
SR406	1,961	3,063	4,159	4,030	3,567	3,539	3,586	3,670	6,528	4,650	7.3	0.53
SR407	6,269	8,858	6,698	10,990	4,645	3,926	3,521	4,385	6,175	4,520	-6.8	0.31

District : LIMBANG

SR502	5,038	3,957	4,065	4,037	8,335	4,144	4,660	4,638	4,926	5,063	1.2	0.03
SR503	15,830	16,319	14,141	19,032	13,519	11,014	12,742	11,150	12,807	13,245	-3.6	0.40
SR505	952	958	888	1,052	1,054	872	1,312	1,301	1,576	1,900	7.3	0.72

District : LAWAS

SR501	3,298	3,265	3,584	3,217	3,911	3,582	3,512	4,742	4,612	4,383	4.0	0.68
SR504	5,235	4,519	5,139	3,653	6,683	6,448	7,243	7,200	7,912	11,701	9.0	0.70

District : SARIKEI

SR601	1,375	1,503	1,581	1,665	2,088	2,169	2,321	3,177	3,821	4,600	13.3	0.95
SR602	1,176	1,395	1,536	1,808	1,866	2,033	2,144	2,448	3,300	2,408	9.3	0.88
SR603	1,208	1,164	1,274	1,446	1,659	1,821	1,922	2,440	2,157	2,426	9.0	0.94

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

State : Sarawak

YEARLY 16-HOUR TRAFFIC VOLUME (2007 - 2016)

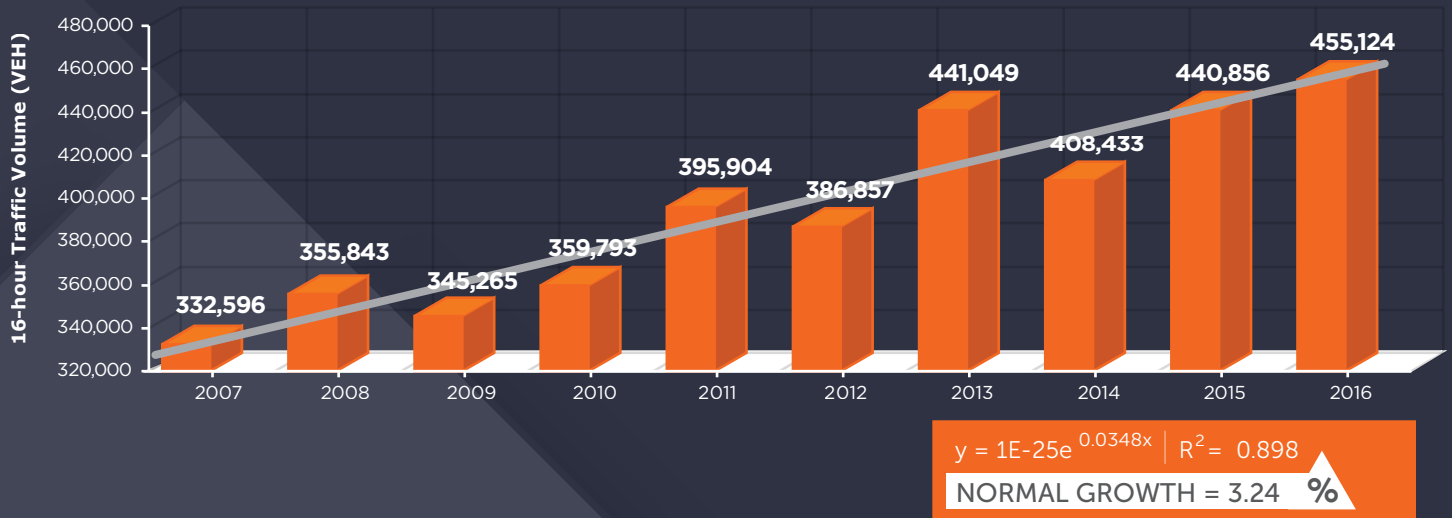
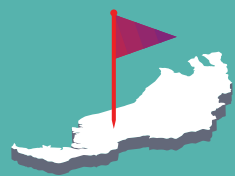


Figure 1-6 : Yearly 16-hour Traffic Volume (2007 - 2016) & Normal Traffic Growth with Exponential Trendline for the Year 2016 in Sarawak



SARAWAK

There are 33 census stations in Sarawak. The 16-hour traffic volume displays the highest traffic volume in the years 2013 and 2016 which are 441,049 as well as 455,124 vehicles respectively. From the figures, there is an escalation of 3.24% of traffic volume for the year 2016 compared to 2015.

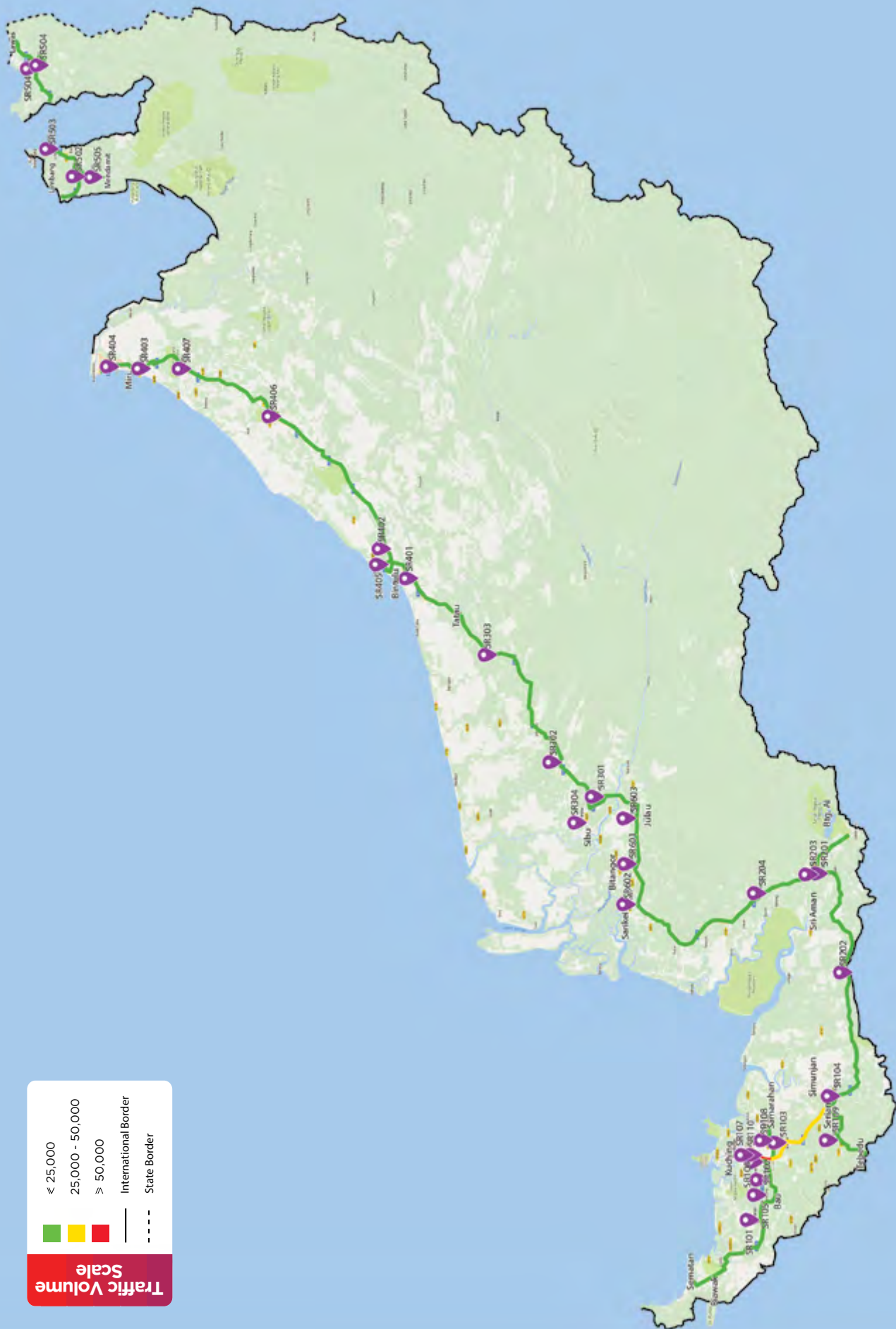


3.48%
Increase

For the year 2016, the observed traffic growth rate for the state of Sarawak is 3.48%. The basis of traffic growth rate record is to be used as a projection indicator of subsequent traffic growth rate for road forethought as well as for the expansion of current and new roads in Sarawak.

AVERAGE 16-HOUR TRAFFIC VOLUME MAP

State : Sarawak



Traffic Volume Scale

- < 25,000
- 25,000 - 50,000
- ≥ 50,000

International Border
State Border



TOLL EXPRESSWAY

ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

Peninsular Malaysia



ANNUAL TRAFFIC GROWTH RATE FOR YEAR 2016

Klang Valley



DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Toll Expressway

E1 & E2 : STRETCH OF NORTH - SOUTH EXPRESSWAY (PLUS)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
	975,118	41,992	38,100	15,912	13,089	1,084,211

E3 : STRETCH OF SECOND LINK EXPRESSWAY (LINKEDUA)

Toll Plaza	Daily Traffic						Total Traffic
	Class 0	Class 1	Class 2	Class 3	Class 4	Class 5	
Tanjung Kupang	33,705	18,485	730	1,118	91	2,021	22,446
Lima Kedai	-	15,775	717	1,593	322	824	19,231
Perling	-	37,858	1,115	1,724	670	421	41,789

E5 : STRETCH OF SHAH ALAM EXPRESSWAY (KESAS)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Sunway	108,918	5,051	2,676	1,824	597	119,067
Awan Besar Timur	59,755	2,074	1,438	1,103	321	64,691
Awan Besar Barat	56,820	1,978	1,412	1,202	342	61,755
Kemuning	82,995	5,135	6,703	1,212	481	96,525

E6 : NORTH-SOUTH EXPRESSWAY CENTRAL LINK (ELITE)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Exit	274,067	13,207	13,646	14,336	3,381	318,636

E7 : STRETCH OF CHERAS - KAJANG HIGHWAY (GRANDSAGA)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Batu 9	69,058	1,290	872	1,394	245	72,860
Batu 11	60,143	1,262	594	1,061	232	63,292

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Toll Expressway

E8 : STRETCH OF KUALA LUMPUR KARAK EXPRESSWAY (KLK)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Gombak	55,131	1,833	2,381	2,302	1,563	63,210
Bentong	39,567	1,820	2,431	283	803	44,903

E8 : STRETCH OF EAST COAST HIGHWAY (LPT) PHASE 1

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
	38,787	1,256	1,644	187	632	42,506

E9 : STRETCH OF SUNGAI BESI EXPRESSWAY (BESRAYA)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Mines	87,194	2,779	1,241	840	961	93,015
Loke Yew	54,006	552	290	940	191	55,979

E10 : STRETCH OF NEW PANTAI EXPRESSWAY (NPE)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Pantai Dalam	95,488.65	910.08	325.95	2,692.39	370.90	99,787.98
PJS 2	57,354.10	537.95	121.18	660.52	281.28	58,955.02
PJS 5	28,102.61	213.45	30.76	720.96	109.48	29,177.27

E11 : STRETCH OF DAMANSARA - PUCHONG EXPRESSWAY (LDP)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Puchong Selatan	99,158	3,472	1,295	2,391	447	106,763
Puchong Barat	76,289	3,179	1,450	1,166	309	82,392
Petaling Jaya	132,356	2,152	965	2,705	424	138,601
Penchala	123,369	1,673	615	2,478	327	128,462

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

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Keramat	51,347	94	4	1,793	218	53,456

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Toll Expressway

E13 : STRETCH OF KEMUNING - SHAH ALAM HIGHWAY (LKSA)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Seri Muda	40,035	1,023	560	472	170	42,262
Alam Impian	26,275	839	211	195	130	27,650

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

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Bangunan Sultan Iskandar	34,463	1,391	2,129	448	3,701	42,132

E15 : STRETCH OF BUTTERWORTH KULIM EXPRESSWAY (BKE)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Kubang Semang	37,306	977	1,145	298	426	40,153
Lunas	32,395	1,095	969	295	446	35,201

E17 : STRETCH OF BUTTERWORTH OUTER RING ROAD (BORR)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Perai	15,284	226	813	537	620	17,481
Bagan Ajam	15,175	101	500	189	425	16,390
Sg. Nyior	20,255	291	924	215	185	21,870

E18 : STRETCH OF KAJANG DISPERSAL EXPRESSWAY (SILK)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
Sg. Balak	41,379	980	452	719	142	43,671
Sg. Ramal	72,544	1,792	957	1,298	651	77,242
Bukit Kajang	42,956	1,448	956	742	260	46,361
Sg. Long	25,130	770	531	305	81	26,816

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Toll Expressway

E20 : STRETCH OF MAJU EXPRESSWAY (MEX)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Putrajaya	54,797	418	185	10,877	1,823	68,100
Salak Selatan	38,692	290	334	5,088	619	45,023
S. Kembangan	19,609	209	34	458	66	20,375

E21 : STRETCH OF KAJANG SEREMBAN HIGHWAY (LEKAS)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
	58,908	2,140	1,824	842	194	63,907

E22 : STRETCH OF SENAI DESARU EXPRESSWAY (SDE)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Exit	10,677	459	843	132	55	12,166

E23 : STRETCH OF SPRINT EXPRESSWAY (SPRINT)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Damansara	49,724	315	125	1,278	116	51,558
Pantai	83,372	631	254	1,284	193	85,735
Kiara	68,114	318	117	1,952	182	70,684

E25 : STRETCH OF KUALA LUMPUR-KUALA SELANGOR EXPRESSWAY (LATAR)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Ijok	14,708	430	172	149	105	15,564
Kuang	24,112	752	563	320	119	25,865
Taman Rimba Templer	17,431	727	324	230	53	18,765
Kundang	6,639	173	146	112	8	7,078

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Toll Expressway

E26 : STRETCH OF SOUTH KLANG VALLEY EXPRESSWAY (SKVE)

Toll Plaza	Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Exit	12,381,593	768,683	1,293,128	118,244	45,554	14,607,202

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Exit	33,922	2,106	3,543	324	125	40,020

E28 : 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	1,151	13,979	659	354	80	443	15,515

E29 : STRETCH OF SEREMBAN PORT DICKSON HIGHWAY (SPDH)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Mambau	21,238	333	528	106	191	22,395
Lukut	4,877	149	106	39	20	5,191

E30 : STRETCH OF NEW NORTH KLANG STRAITS BYPASS (NNKSB)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Bukit Raja	56,853	3,068	1,377	572	310	62,179
Kapar	7,262	1,034	4,559	118	47	13,020
Kapar Moc (A)	2,280	367	1,433	32	91	4,204
Kapar Moc (B)	8,295	545	362	94	68	9,363

E33 : STRETCH OF DUTA - ULU KELANG HIGHWAY (DUKE)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Ayer Panas	40,891	391	174	669	127	42,252
Sentul Pasar	28,583	375	589	623	358	30,528
Batu	54,016	507	578	672	309	56,083

E35 : STRETCH OF GUTHRIE CORRIDOR EXPRESSWAY (GUTHRIE)

Toll Plaza	Daily Traffic					
	Class 1	Class 2	Class 3	Class 4	Class 5	Total Traffic
Bukit Jelutong	45,293	1,356	1,164	470	214	48,497
Elmina	29,259	1,170	1,010	288	139	31,866
Lagong	22,973	981	746	194	124	25,019

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Toll Expressway

E36 : JAMBATAN PULAU PINANG (JPP)

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	0	16,269	61,924	3,117	2,072	232	250	98	83,614

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

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
KL - Seremban	127,161	3,786	1,761	2,401	2,383	137,492

E38 : STORMWATER MANAGEMENT AND ROAD TUNNEL (SMART)

Toll Plaza	Daily Traffic					Total Traffic
	Class 1	Class 2	Class 3	Class 4	Class 5	
SMART	24,589	-	-	136	-	24,725

Source : Malaysian Highway Authority

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Expressway Vehicle Classification

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

DAILY AVERAGE TRAFFIC ON THE MAINLINE FOR THE YEAR 2016

Penang Bridge



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





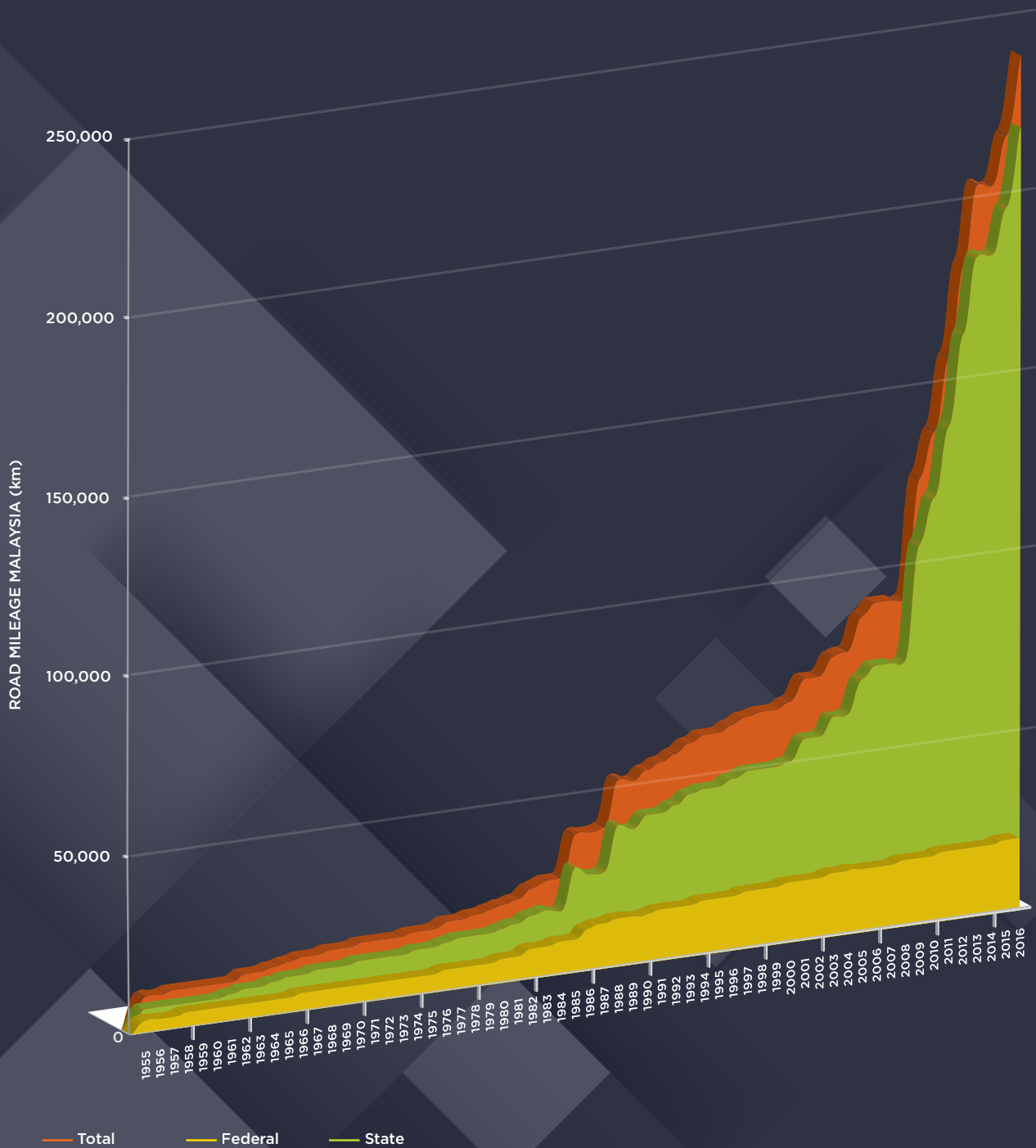
ROAD MILEAGE

TOTAL MALAYSIA ROAD MILEAGE BY YEAR (KM) - FROM YEAR 1955 UNTIL 2016

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
2015	19,819.31	0.00	19,819.31	144,213.60	52,801.45	197,015.05	164,032.91	52,801.45	216,834.36
2016	19,802.16	0.00	19,802.16	160,391.79	58,595.99	218,987.78	180,193.95	58,595.99	238,823.14

Source : Road Facilities Maintenance Division, JKR Malaysia

TOTAL MALAYSIA ROAD MILEAGE BY YEAR (KM) - FROM YEAR 1955 UNTIL 2016



Figures 5-1 : Road Mileage in Malaysia by Year (1955 - 2016)

The summary of road mileage for both State and Federal Roads from the year 1956 to 2016 can be seen in Figure 5-1. Both State and Federal Roads have recorded a slow growth for road mileage from the year 1956 to 1984. However, the following year shows a rapid growth with 84% increase between the years 1986 to 2016. In the meantime, federal roads' mileage remained below 20,000km until 2016.

Distribution Of Federal Road And State Road In Malaysia



Table 5-2 : Distribution Of Federal Road And State Road In Malaysia

Distribution of Pavement Types in Federal Road and State Road in Malaysia

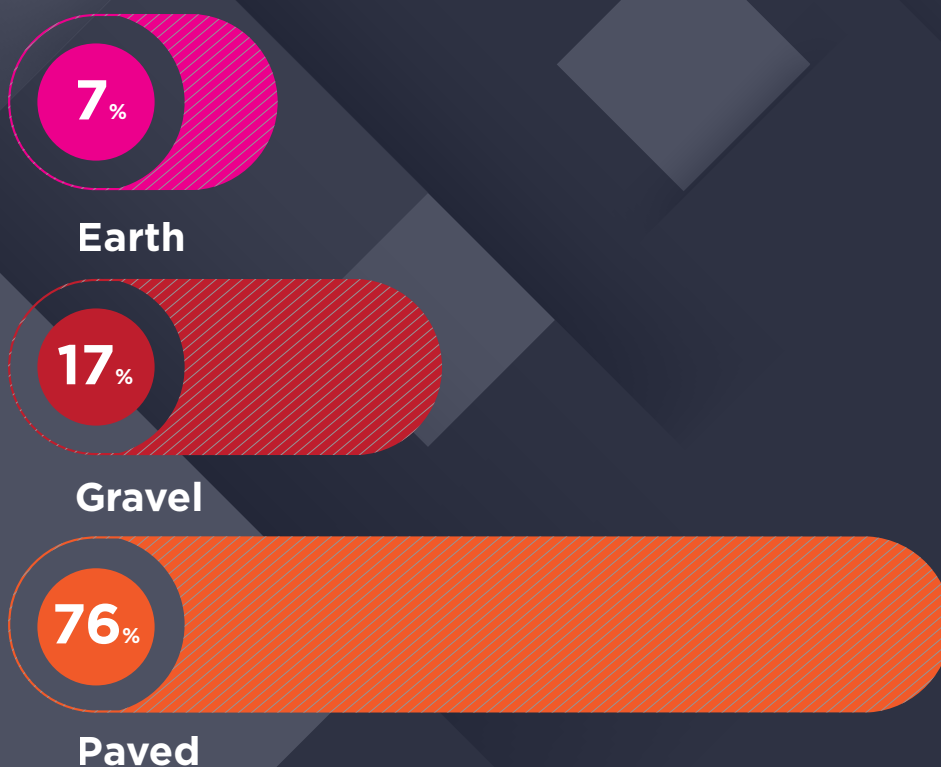


Table 5-3 : Distribution of Pavement Types in Federal Road and State Road in Malaysia

TOTAL MALAYSIA ROAD MILEAGE BY YEAR (KM) - FROM YEAR 1955 UNTIL 2016

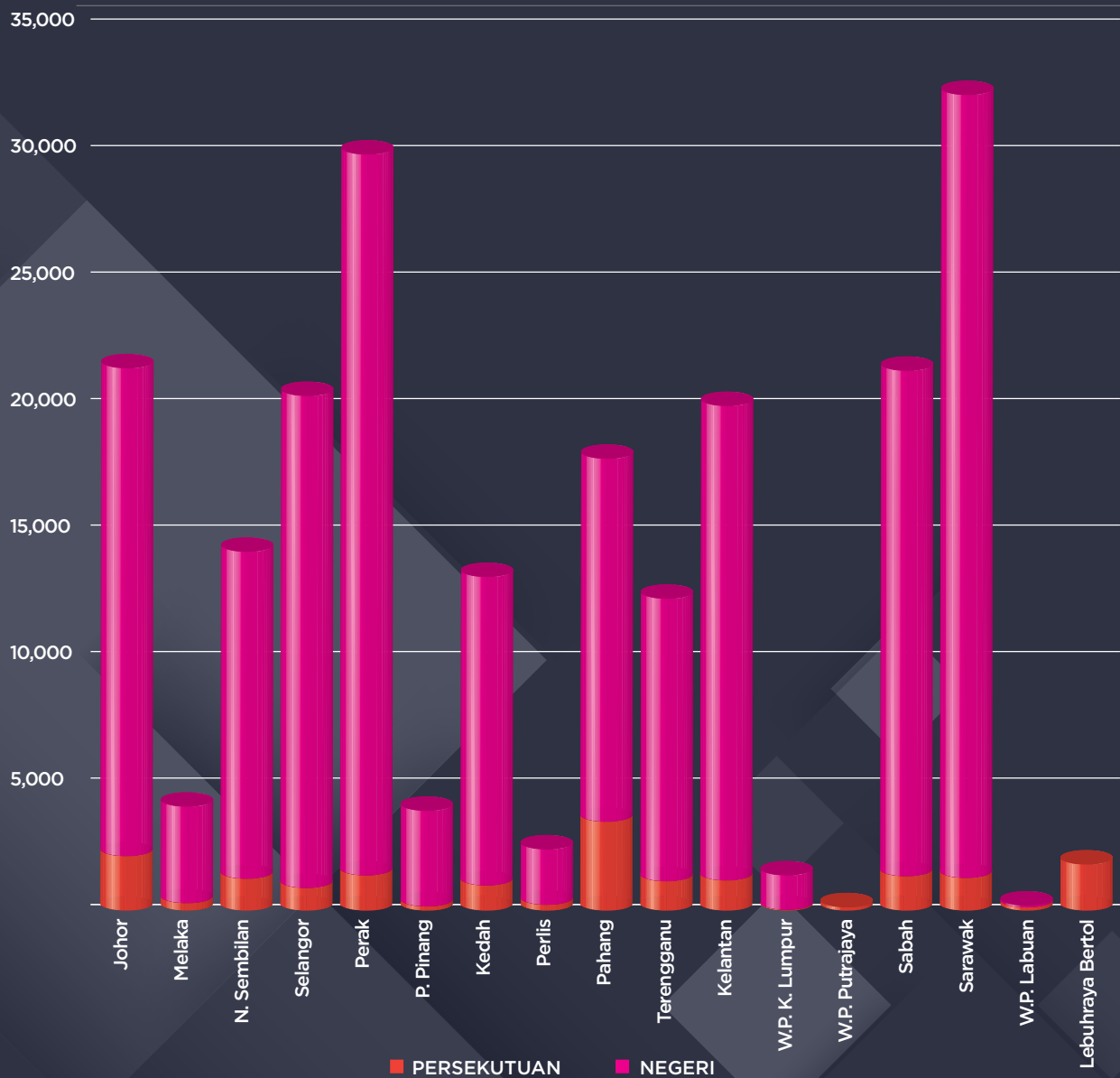


Table 5-4 : Distribution of Federal and State Road Network by State in Malaysia

Federal Road can be categorised as follows:

- (a) Main Federal Roads;
- (b) FELDA/ FELCRA Federal Roads;
- (c) Road to Main Federal Institutions.
- (d) Road to Industrial;
- (e) Road to the Regional Development;
- (f) Main Federal Roads in Sabah, Sarawak and Federal Territory of Labuan;
- (g) Toll Expressways; and
- (h) Toll Highways.

State Road can be categorised as follows:

- (a) Main State Roads;
- (b) Municipal Roads;
- (c) Low-Cost Housing Area Roads;
- (d) Back Alleys;
- (e) Agricultural Roads;
- (f) Rural Roads; and
- (g) Tourist Island Roads.

The total mileage ratio of the Federal Road to the State Road is 1:11.

Sarawak leads with the highest total road mileage in Malaysia, alongside 1,423.79km of Federal Road, and 34,092.74km of State Road. This highlights Sarawak as also being the highest of State Road mileage. In Peninsular Malaysia, Perak is the highest in total road mileage. This includes 1,504.16km of Federal Road as well as 31,419.82km of State Road. Pahang has the highest Federal Road Mileage at 3,874.4km. The roads are mostly asphalt and concrete pavement (76%), gravel (17%) and lastly earth (7%).

TOTAL ROAD MILEAGE BY STATE (KM)

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	19,362.84	1,509.28	392.18	21,264.29	21,731.52	1,509.28	392.18	23,632.98
Melaka	312.77	0.00	0.00	312.77	3,855.35	253.99	100.61	4,209.94	4,168.12	253.99	100.61	4,522.71
N. Sembilan	1,382.58	0.00	0.00	1,382.58	13,813.01	273.16	158.27	14,244.44	15,195.59	273.16	158.27	15,627.02
Selangor	977.46	0.00	0.00	977.46	19,080.53	1,382.93	958.51	21,421.97	20,057.99	1,382.93	958.51	22,399.43
Perak	1,514.06	0.00	0.00	1,514.06	17,831.12	11,412.12	2,176.58	31,419.82	19,345.18	11,412.12	2,176.58	32,933.88
P. Pinang	190.25	0.00	0.00	190.25	3,054.56	1,067.53	44.26	4,166.34	3,244.81	1,067.53	44.26	4,356.59
Kedah	1,105.55	0.00	0.00	1,105.55	11,934.50	1,299.35	178.59	13,412.44	13,040.05	1,299.35	178.59	14,517.99
Perlis	247.20	0.00	0.00	247.20	1,726.05	473.18	213.80	2,413.03	1,973.24	473.18	213.80	2,660.22
Pahang	3,874.40	0.00	0.00	3,874.40	12,921.46	2,469.63	402.36	15,793.45	16,795.86	2,469.63	402.36	19,667.85
Terengganu	1,275.71	0.00	0.00	1,275.71	9,517.45	1,903.06	890.82	12,311.34	10,793.16	1,903.06	890.82	13,587.05
Kelantan	1,330.37	0.00	0.00	1,330.37	16,447.13	2,766.20	1,430.80	20,644.13	17,777.49	2,766.20	1,430.80	21,974.49
W.P. Kuala Lumpur	22.45	0.00	0.00	22.45	1,497.92	19.08	0.00	1,517.01	1,520.38	19.08	0.00	1,539.46
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
Jumlah Kecil	14,751.06	0.00	0.00	14,751.06	131,041.91	24,829.51	6,946.77	162,818.19	145,792.97	24,829.51	6,946.77	177,569.25
Sabah	1,501.84	0.00	0.00	1,501.84	10,250.41	10,340.22	1,419.16	22,009.79	11,752.25	10,340.22	1,419.16	23,511.63
Sarawak	1,423.79	0.00	0.00	1,423.79	19,032.41	5,969.06	9,091.27	34,092.74	20,456.20	5,969.06	9,091.27	35,516.53
W.P. Labuan	137.26	0.00	0.00	137.26	67.06	0.00	0.00	67.06	204.32	0.00	0.00	204.32
Jumlah Kecil	3,062.89	0.00	0.00	3,062.89	29,349.88	16,309.28	10,510.43	56,169.59	32,412.77	16,309.28	10,510.43	59,232.48
Lebuhraya Bertol	1,988.21	0.00	0.00	1,988.21	0.00	0.00	0.00	0.00	1,988.21	0.00	0.00	1,988.21
TOTAL	19,802.16	0.00	0.00	19,802.16	160,391.79	41,138.79	17,457.20	218,987.78	180,193.96	41,138.79	17,457.20	238,789.94

- Note : 1. Perangkaan Jalan Persekutuan mengikut Warta Jalan Persekutuan sehingga 31.12.2015
2. Perangkaan Jalan Negeri mengikut daftar MARRIS sehingga 6.1.2016
3. Jalan W.P Putrajaya adalah di bawah kuasa Perbadanan Putrajaya



VEHICLE REGISTRATION

TOTAL CUMULATIVE OF NEW REGISTRATION OF MOTOR VEHICLES

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
2015	12,094,790	11,871,696	108,149	66,999	1,197,987	63,885	-	898,446	26,301,952
2015	12,677,041	12,977,839	99,705	59,977	1,191,310	26,094	-	1,191,310	27,163,120

Source : Road Transport Department of Malaysia

TOTAL CUMULATIVE OF NEW REGISTRATION OF MOTOR VEHICLES

Total Cumulative of New Registration of Motor Vehicles for Taxi, Bus, Lorry & Van, Hire Car, Trailer and Other Vehicle in Malaysia until 2016

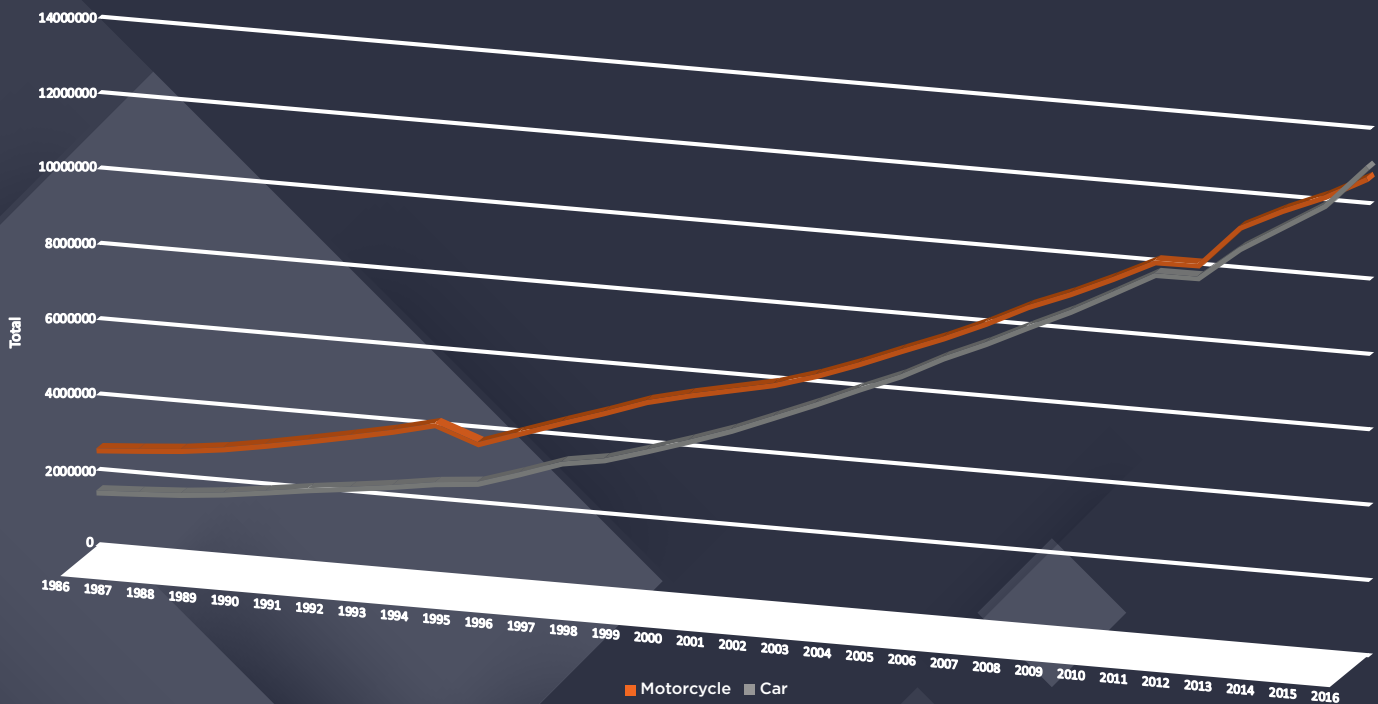


Figure 6-1 : Total Cumulative of New Registration of Motor Vehicles for Taxi, Bus, Lorry & Van, Hire Car, Trailer and Other Vehicle in Malaysia until 2016

Total Cumulative of New Registration of Motor Vehicles for Motorcycle and Car in Malaysia until 2016

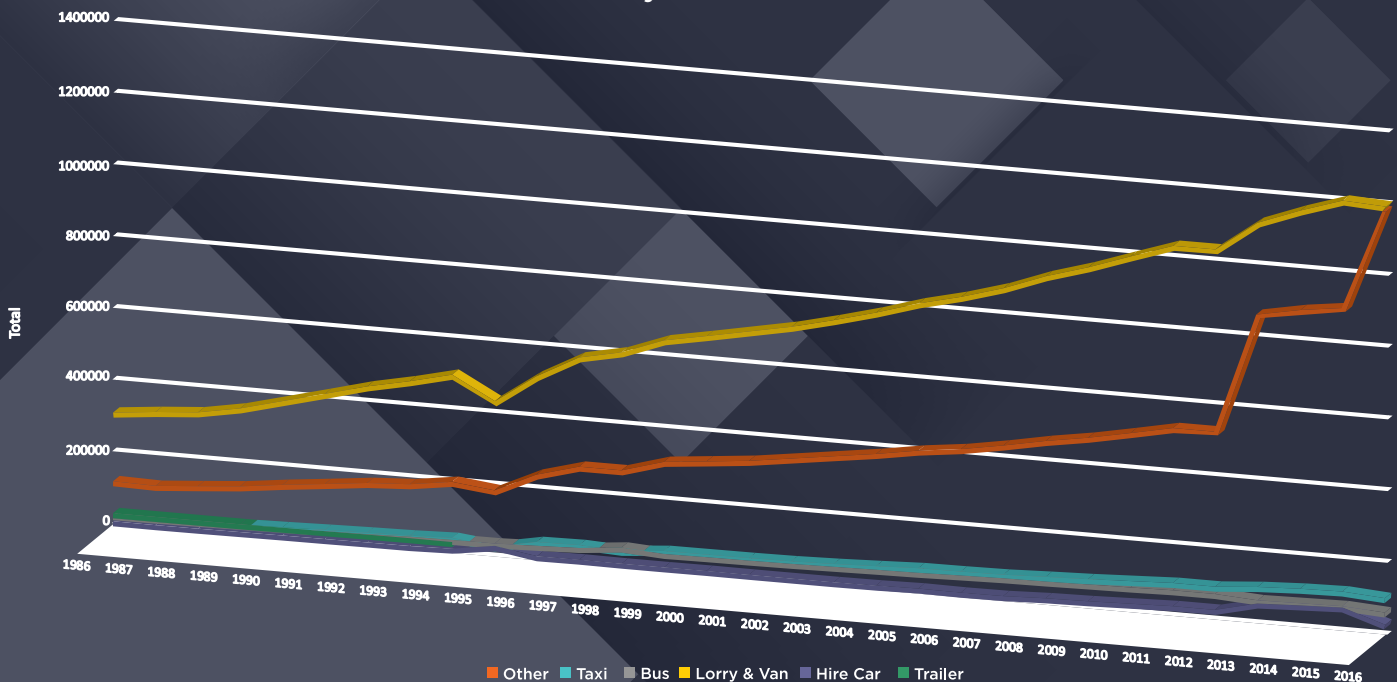


Figure 6-2 : Total Cumulative of New Registration of Motor Vehicles for Motorcycle and Car in Malaysia until 2016

Figure 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 2016. The highest increase are cars, 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 2016. Meanwhile, cars and motorcycles registered until 2016 almost reached 13,000 units.

TOTAL CUMULATIVE OF MOTOR VEHICLES

By State And Type of Vehicle 2016

Type of Vehicle	Private Vehicle		Public Vehicle			Lorry & Van	Other	Total
State	Motorcycle	Car	Bus	Taxi	Hire Car			
Perlis	3,156	735	1	0	0	21	23	3,936
Kedah	34,353	4,650	14	11	17	962	276	40,283
Pulau Pinang	32,590	11,316	91	102	47	2,400	562	47,108
Perak	32,707	5,810	86	13	0	2,061	615	41,292
Selangor	50,970	11,850	581	854	99	6,607	5,270	76,231
Wilayah Persekutuan	44,774	55,613	452	1,283	3,727	7,839	1,721	115,409
Negeri Sembilan	15,104	2,624	16	28	2	1,551	147	19,472
Melaka	12,491	4,292	10	1	1	615	393	17,803
Johor	53,424	15,648	222	367	13	4,609	1,605	75,888
Pahang	18,089	4,528	8	0	0	929	417	23,971
Terengganu	13,669	1,608	6	2	0	239	42	15,566
Kelantan	13,671	3,052	29	3	0	586	120	17,461
Sabah	19,500	14,499	89	26	178	1,828	976	37,096
Sarawak	23,090	13,732	32	4	127	2,628	2,137	41,750
Portal Rakan Niaga	97,612	429,572	0	41	11	1,426	107	528,769
Total	465,200	579,529	1,637	2,735	4,222	34,301	14,411	1,102,035

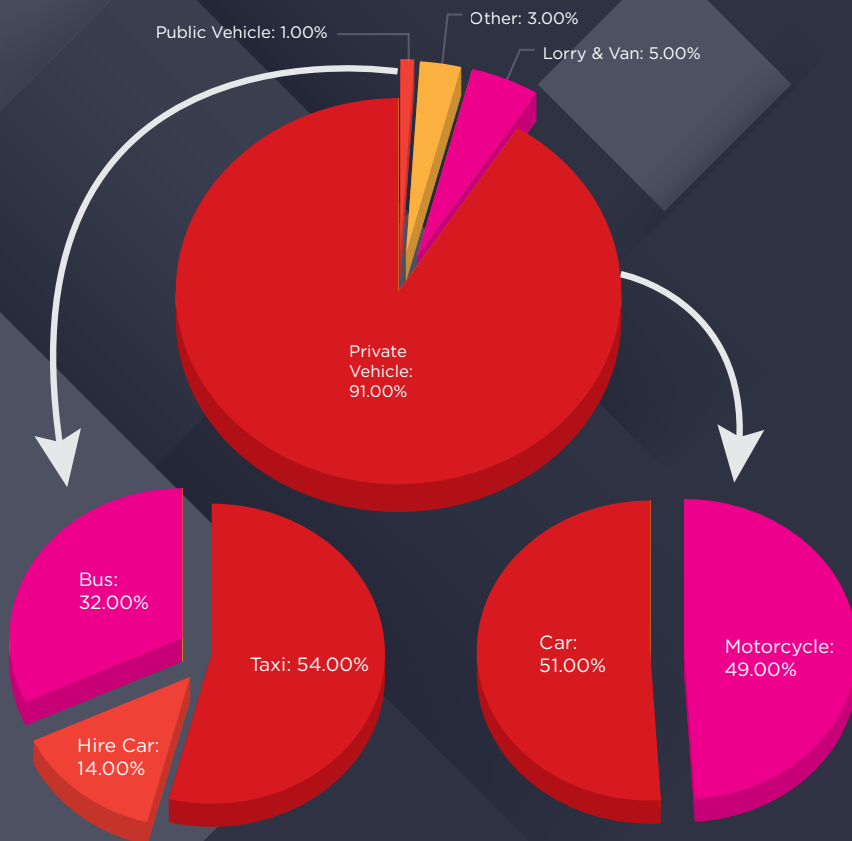


Figure 6-3 : By State And Type of Vehicle 2016

NEW REGISTRATION OF MOTOR VEHICLES

Between the years 1986 to 2016, new registration of motor vehicles for cars, taxis, buses, lorries, and vans, hire cars, trailers and others total cumulatively as can be seen in Figure 6-3. These new registrations are attributed by cars, which are the highest; and trailers, being the lowest. From 1986 until 2016 saw an increase of three types of vehicles, hire car, taxi and bus. However, these did not exceed 200,000 units. On the other hand, almost 13,000 units of cars and motorcycles are registered in 2016.

By State And Type of Vehicle 2016

Type of Vehicle State	Private Vehicle		Public Vehicle			Lorry & Van	Other	Total
	Motorcycle	Car	Bus	Taxi	Hire Car			
Perlis	83,160	26,256	187	196	1	1,997	1,345	113,142
Kedah	938,067	339,254	2,881	3,779	644	40,420	20,055	1,345,100
Pulau Pinang	1,392,700	1,126,618	4,704	4,326	503	79,085	26,402	2,634,338
Perak	1,346,873	770,427	4,771	4,649	84	74,884	42,412	2,244,100
Selangor	1,402,497	1,151,577	6,928	16,273	897	191,367	102,026	2,871,565
Wilayah Persekutuan	1,840,901	3,962,493	18,479	40,289	20,880	265,461	121,757	6,270,260
Negeri Sembilan	551,174	341,997	2,409	2,186	23	49,312	7,771	954,872
Melaka	466,884	343,019	1,490	1,896	41	28,270	8,708	850,308
Johor	1,850,745	1,492,625	7,651	12,548	194	151,296	65,382	3,580,441
Pahang	592,112	390,643	1,833	2,485	11	45,330	14,538	1,046,952
Terengganu	385,705	210,601	1,015	1,123	21	22,122	6,016	626,603
Kelantan	545,182	308,371	1,910	2,002	25	29,493	7,282	894,265
Sabah	391,682	691,294	2,962	5,347	1,478	115,717	65,309	1,273,789
Sarawak	786,759	807,945	2,757	2,326	790	93,969	70,645	1,765,191
Portal Rakan Niaga	102,600	1,034,719		280	502	2,587	1,506	1,142,194
Total	12,677,041	12,997,839	59,977	99,705	26,094	1,191,310	561,154	27,613,120

NEW REGISTRATION OF MOTOR VEHICLES BY STATE

Total New Registration Of Motor Vehicles In Malaysia By State For The Year 2007 - 2016

STATE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Perlis	4,205	5,602	4,566	5,434	4,202	5,475	3,627	6,266	5,709	3,936
Kedah	45,265	53,638	48,211	55,835	62,929	66,138	60,915	55,969	50,130	40,283
Pulau Pinang	101,949	109,033	92,320	111,882	106,514	113,340	92,863	91,505	56,515	47,108
Perak	80,369	88,783	78,040	84,199	87,577	94,952	82,438	71,812	47,496	41,292
Selangor	101,439	109,890	87,465	105,787	101,439	103,681	101,757	118,698	99,777	76,231
W.P. Kuala Lumpur	258,205	293,064	272,373	306,513	328,578	359,239	356,897	293,622	168,453	115,409
Negeri Sembilan	34,309	36,384	30,931	34,168	33,736	35,446	30,384	31,260	26,543	19,472
Melaka	33,591	36,609	30,919	33,692	33,530	36,354	29,761	30,267	23,598	17,803
Johor	141,679	156,013	130,485	145,040	155,611	172,608	161,963	143,029	93,235	75,888
Pahang	41,869	52,410	41,543	44,646	48,464	50,180	44,904	37,411	29,373	23,971
Terengganu	26,354	32,797	30,170	33,086	32,165	35,663	30,252	25,272	17,836	15,566
Kelantan	38,414	45,840	40,732	45,686	44,591	51,189	41,951	40,436	27,880	17,461
Sabah	49,737	61,338	58,834	69,301	79,229	85,049	74,124	73,355	49,605	37,096
Sarawak	65,826	75,202	70,772	82,803	93,434	102,435	90,838	91,028	63,162	41,750
Portal Rakan Niaga	0	0	0	0	0	0	0	172,006	441,448	528,769
Total	1,023,211	1,156,603	1,017,361	1,158,072	1,211,999	1,311,749	1,202,674	1,281,936	1,200,760	1,102,035

In 2016, Portal Rakan Niaga registered 47.98% of new motor vehicles, making it the highest registration in new motor vehicles. This shows a rise in registration when compared to 2015. Although it started only in 2014, one of the benefits is that it allows transactions for vehicles registration to be done online. With the advancement of technology, many have turned to online registration which explains a decrease in registration of new motor vehicles in every state for 2016.

One state marks the lowest number of new registration of motor vehicles, which is Perlis, with the lowest compared to other state. The registered number of new motor vehicles in 2016 has decreased by 31.0% when compared to 2015. It can be observed that the number of new motor vehicles that has been registered is decreasing from 2014 until 2016.

NEW REGISTRATION OF MOTOR VEHICLES BY STATE

The total accumulated motor vehicles in Malaysia as of 31 December 2014 are 25,101,192 vehicles. The categories of motor vehicles are Private Vehicle, Public Vehicle, Lorry & Van and Others. Their total accumulated increase in 2014 is 5.4%. This percentage is broken down as follows: Private Vehicle, Public Vehicle, Lorry & Van and Others.

(a) Private Vehicle - 91%
 (i) Motorcycles - 11,629,265
 (ii) Cars - 11,199,910

(b) Public Vehicle - 1%
 (i) Buses - 65,044
 (ii) Taxis - 105,689
 (iii) Hire Cars - 58,945

(c) Lorry & Van - 5%

(d) Others - 4%

Among the Road Transport Department Malaysia's duties is to regulate all these motor vehicles safely and effectively. This is carried out using efficient, reputable and advanced technology enforcement as well as service deliveries to fulfil the need of the country and customers.

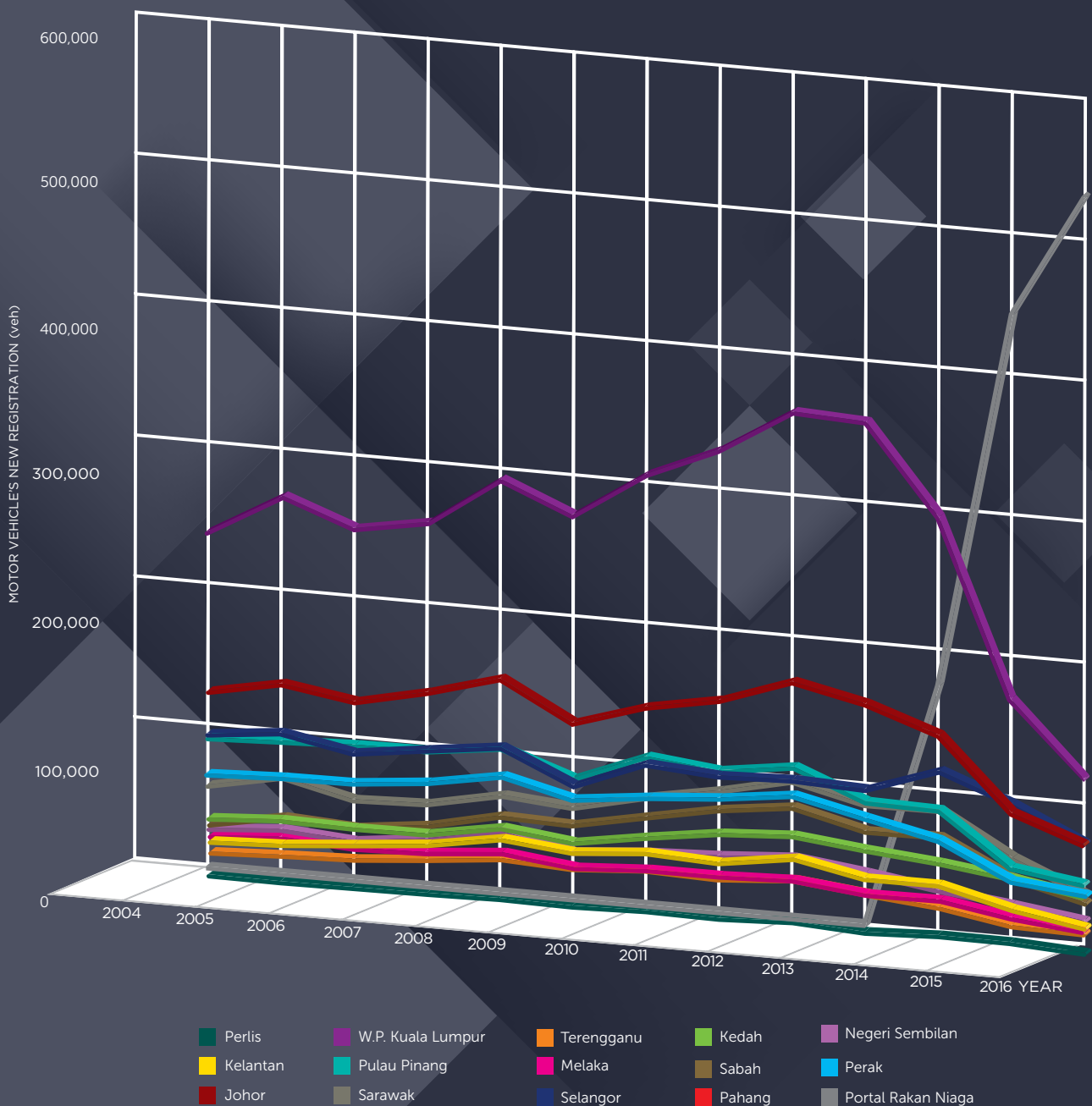


Figure 6-4 : New Registration Of Motor Vehicles In Malaysia By State For The Year 2004 - 2016





APPENDIXES



Bahagian Perancang Jalan
 KEMENTERIAN KERJA RAYA MALAYSIA

LAPORAN BANCILALU LINTAS KEBANGSAAN

Rekod Kiraan Manual

Negeri : _____ Daerah : _____ Tarikh : _____
 Hari : _____
 No. Stesen : _____ *Jenis Kajian : 0 / 1 / 3 Hari ke : _____

Maklumat Lokasi
 Lokasi : KM _____ Seksyen _____ Koordinat:
 No. Laluan _____ Jalan _____ N :°'
 Deskripsi lokasi / Landmark berhampiran _____ E :°'
 Lalulintas dari _____ ke _____ *Arah : 1 / 2

Maklumat Lorong
 *Jenis Lorong : Tunggal / Berkembar Jumlah Bilangan lorong : _____ Lebar selorong : _____ m

Maklumat Bahu Jalan
 *Bahu Jalan : Ada / Tiada Jenis bahu jalan: berturap / tanah / kerikil Lebar bahu jalan berturap (sebelah) : _____ m

Maklumat Keseragaman Jalan (lingkungan 1km dari stesen banci)
 *Bil. lorong : seragam / tidak seragam *Keadaan jalan : berbukit / rata *Lebar lorong : seragam / tidak seragam





Masa	Motokar dan Teksi	Van kecil & Utiliti (Ringan - 2 gandar)	Lori & Van Besar (Berat - 2 gandar)	Lori dengan 3 Gandar atau Treler (Berat - dan melebihi 2 gandar)	Bas	Motosikal	Jumlah
0600-0700							
0700-0800							
0800-0900							
0900-1000							
1000-1100							
1100-1200							
1200-1300							
1300-1400							
1400-1500							
1500-1600							
1600-1700							
1700-1800							
1800-1900							
1900-2000							
2000-2100							
2100-2200							
2200-2300							
2300-2400							
0000-0100							
0100-0200							
0200-0300							
0300-0400							
0400-0500							
0500-0600							
Jumlah							

Catatan : *potong yang tidak berkenaan **Tandatangan, Cop Nama & Jawatan dan No. Tel. Untuk Dihubungi

**Disediakan oleh (Ketua Stesen Banci):

Disahkan oleh:

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 axes) <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 axes) <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.

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