



**Suruhanjaya Komunikasi dan Multimedia Malaysia**  
Malaysian Communications and Multimedia Commission

**GUIDELINES TO THE COMMISSION DETERMINATION  
ON THE MANDATORY STANDARDS FOR  
QUALITY OF SERVICE (PUBLIC CELLULAR SERVICE)  
DETERMINATION NO. 1 OF 2015**

**(SKMM(T)-SPD/100/019/001/Jld.1(2015))**

**JULY 2015**

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## **PART A: OBJECTIVE AND SCOPE**

1. These guidelines are developed by the Malaysian Communications and Multimedia Commission (the "Commission") pursuant to paragraph '8' of the Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service), Determination No. 1 of 2015 ("Mandatory Standards").
2. These guidelines set out the testing procedures, examples of computations, reporting templates, explanatory notes and list of designated routes and areas to the standards proposed in the Mandatory Standards.

## **PART B: REQUIREMENT FOR REPORT SUBMISSION**

3. All reports (including notices and notifications) that are required to be sent to the Commission should be sent to the Monitoring & Compliance (Communications) Department at the address and/or email as follows:

Monitoring & Compliance (Communications) Department  
Malaysian Communications and Multimedia Commission  
MCMC Tower 1, Jalan Impact, Cyber 6,  
63000 Cyberjaya  
Selangor Darul Ehsan  
Email : [qos.admin@cmc.gov.my](mailto:qos.admin@cmc.gov.my)

4. These reports shall be in the form and format as prescribed in these guidelines. Each report shall be accompanied by a declaration signed by an officer of the service provider duly authorised by the board of directors, stating that each report is true and accurate.
5. The timelines for reporting are as follows:

**Table 1: Reporting Timelines**

<b>No</b>	<b>Item</b>	<b>Reporting Period</b>	<b>Quality of Service (QoS) Report Submission Date</b>
1.	QoS performance report (1 <sup>st</sup> Quarter)	1st January to 31st March	By 30th April of the same year
2.	QoS performance report (2 <sup>nd</sup> Quarter)	1st April to 30th June	By 31st July of the same year

3.	QoS performance report (3 <sup>rd</sup> Quarter)	1st July to 30th September	By 31st October of the same year
4.	QoS performance report (4 <sup>th</sup> Quarter)	1st October to 31st December	By 31st January of the next year
5.	Advance notice of scheduled downtime	-	72 hours in advance*
6.	Notification of service disruption (via email only)	-	Within 60 minutes*
7.	Comprehensive report of service disruption	-	Within 7 business days*

*\*Please see details below*

## **PART C: NETWORK PERFORMANCE QUALITY OF SERVICE**

### **CALL SETUP SUCCESS RATE AND DROPPED CALL RATE**

6. Number of successful call attempts means the number of call attempts less the number of blocked calls. A blocked call means that the call failed to be established due to a lack of available resources or no alerting within the call setup timeout.
7. The tests to measure the compliance with the standards on call setup success rate and dropped call shall be by way of a drive test or static test, or both drive and static tests. The Commission will, at its sole discretion, decide on which test should be conducted.
8. These tests will be carried out by the Commission, or the Commission's appointed consultant, in accordance with these guidelines. However, the Commission may, at its sole discretion, request the Public Cellular Service Providers to conduct the tests, if necessary.

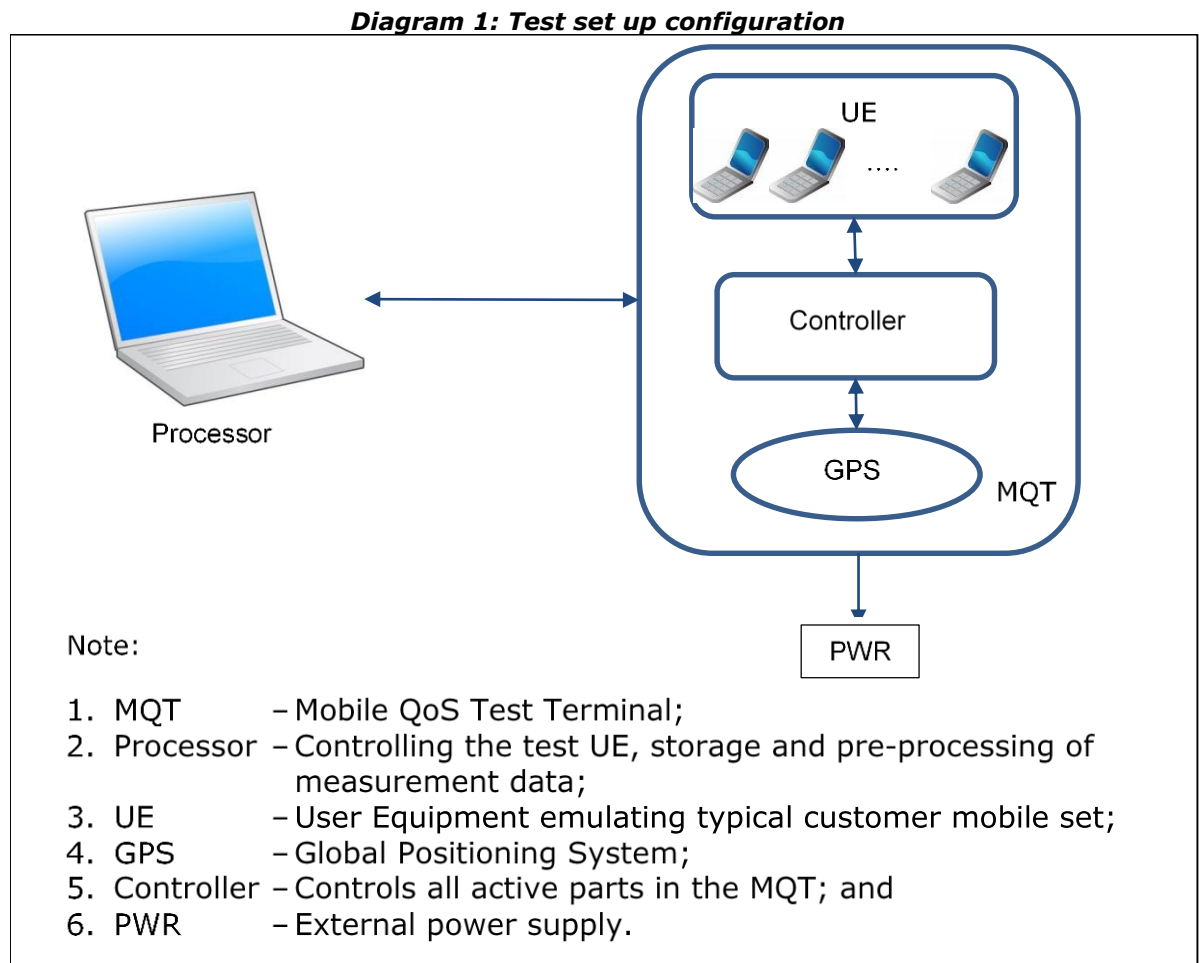
### **Route or Location Identification**

9. The tests are to be carried out along routes (for the drive test) or locations (for the static test) that have been ascertained to have cellular coverage.

10. Cellular coverage will be ascertained in the following manner:
  - a. Confirmation from the public cellular service providers;
  - b. Through the coverage information advertised by the public cellular service providers; or
  - c. Through the network indicator display on test phones.

**Testing parameters**

11. The test set up configuration is as shown below:



12. The test call number will be a switch terminating number (for inter-network and intra-network testing) i.e. the test will only measure the call setup success rate and dropped call rates of the mobile originated call network.

13. The tests would be based on the following parameters:

- a. Call holding time = 120 seconds
- b. Interval time = 30 seconds
- c. Call setup timeout = 20 seconds
- d. Test samples = minimum of 100 samples

*Note: Call window = 170 seconds = (a + b + c)*

14. The software/measurement tools used for the tests shall be in compliance with the relevant European Telecommunications Standards Institute (ETSI)'s standards.

15. For the purposes of multi-network testing, the test call windows must be synchronized. If there are calls that have failed or dropped, the next call attempt shall be made only when the next call window arrives.

16. Geographical positioning will be based on the Global Positioning System (GPS) and the WGS-84 digital map or its equivalent.

### **Designated routes and areas**

17. For the purpose of dropped call rate measurement, the designated routes and areas are as follows (detailed maps are annexed in **Appendix** of this document):

- a. Selected routes and areas in Putrajaya;
- b. Selected routes and areas in Cyberjaya;
- c. Maju Expressway (both ways);
- d. Selected routes from Kuala Lumpur International Airport (KLIA) to Sultan Abdul Aziz Shah (Subang) Airport via ELITE Highway; and
- e. Selected routes from Sultan Abdul Aziz Shah (Subang) Airport to Jalan Duta via North Klang Valley Expressway (NKVE).

## ADVANCE NOTICE OF SCHEDULED DOWNTIME

18. Advance notice of scheduled downtime to customers via service provider's official website and Short Messaging Services (SMS) should clearly state at least the following:
  - a. Date, time and area affected by the scheduled downtime;
  - b. Type of service affected; and
  - c. Details of Customer Hotline.
19. Advance written notice of scheduled downtime to the Commission should clearly state at least the following:
  - a. Date, time and area affected by the scheduled downtime;
  - b. Type of service affected;
  - c. Details of Customer Hotline; and
  - d. Justification for the scheduled downtime.

## SERVICE DISRUPTION

20. The Service Provider shall submit quarterly reports on service disruption as per the following format:

**Table 2: Format for service disruption in quarterly reports**

<b>Report Items</b>	<b>Impact of single incident of service disruption</b>	<b>QoS Standard</b>	<b>Compliance</b>
Duration the Mobile Switching Centre (MSC) is out of service (minutes)		Less than 30 minutes	Yes/No

21. The Service Provider must notify the Commission within 60 minutes of the occurrence of any single service disruption incident that involves a Mobile Switching Centre (MSC) being out of service for any duration. The details of the report shall be presented in the following format:

**Table 3: Format for service disruption (involving MSC) in notification report**

No	Report Items	Details/Remarks
1.	Date and time of service disruption	(a) Start: (date/time) (b) End : (date/time)
2.	Area affected by the service disruption	
3.	Type of services affected and service impact	
4.	Current status of service disruption	

22. The service provider must submit a comprehensive report to the Commission within 7 business days of the occurrence of any single service disruption incident where a Mobile Switching Centre (MSC) is out of service for 30 minutes or longer. The details of the report shall be presented in the following format:

**Table 4: Format for service disruption (involving MSC) in comprehensive report**

No	Report Items	Details/Remarks
1.	Date and time of service disruption	(a) Start: (date/time) (b) End : (date/time)
2.	Area affected by the service disruption	
3.	Exact duration of service disruption	
4.	Type of services affected and service impact	
5.	Number of affected customers	
6.	Status of service disruption	<i>*The date and time are to be specified if the service is fully restored</i>
7.	Photographic evidence of faulty network element (if applicable)	



8.	Description of the cause and problem	
9.	Rectification steps taken to restore the service	
10.	Preventive actions to avoid the recurrence of the same or similar service disruption	
11.	Compensation Plan offered to affected customers (if any)	

23. Service Provider shall notify customers via electronic media (i.e. website and social media) as soon as is practicable in respect of any service disruption incident.

## **PART D: CUSTOMER SERVICE QUALITY OF SERVICE**

### **PERCENTAGE OF BILLING RELATED COMPLAINTS**

24. Service Provider shall submit quarterly reports on billing related complaints as per the following format:

***Table 5: Format for billing related complaints in quarterly reports***

<b>Report Items</b>	<b>Total number over the reporting period</b>	<b>QoS Standard</b>	<b>Compliance</b>
Total number of billing related complaints received in the reporting period			
Total number of active customers at the end of the reporting period			
% of billing related complaints		not more than 1.0%	Yes/No

25. Service provider is required to provide details on the types of billing related complaints received in a quarter as per the following format:

**Table 6: Format for types of billing related complaints in quarterly reports**

No.	Types of Billing related complaints	No. of complaints received in a reporting period
		Total 3 Months
1.	Wrongly / not credited	
2.	Double charges	
3.	Non-refund of deposits	
4.	Late bills	
5.	Non-receipt of bills	
6.	Fraud	
7.	Wrongly addressed	
8.	Other billing errors	
9.	Please list other types of billing related complaints (if any)	

26. The above list of types of billing related complaints is not exhaustive. The report should include all billing related complaints and not just those specified in the report format.

### **NON-BILLING RELATED COMPLAINTS PER 1000 CUSTOMERS**

27. Service Provider shall submit quarterly reports on non-billing related complaints as per the following format:

**Table 7: Format for non-billing related complaints in quarterly reports**

<b>Report Items</b>	<b>Total number over the reporting period</b>	<b>QoS Standard</b>	<b>Compliance</b>
Total number of non-billing related complaints received in the reporting period			
Total number of active customers at the end of reporting period			
Number of non-billing related complaints per 1000 customer per reporting period		not more than 6.0	Yes/No

28. Service provider is required to provide details of the types of non-billing related complaints received in a quarter as per the following format:

**Table 8: Format for types of non-billing related complaints in quarterly reports**

<b>Types of non-billing related complaints</b>	<b>Total no. of complaints for 3 months</b>
No or late service activation	
No or late service restoration	
Customer service related complaints	
Please list other types of non-billing related complaints (if any)	

29. The above list of types of non-billing related complaints is not exhaustive. The report should include all non-billing related complaints and not just those specified in the report format.

**PROMPTNESS IN RESOLVING CUSTOMER COMPLAINTS**

30. For this standard, the indicator is to be separately measured and reported for  
 (a) Billing related complaints and (b) Non-billing related complaints.

31. Service Provider shall submit quarterly reports on performance of promptness in resolving customer complaints as per the following format:

a. Billing related complaints

**Table 9: Format for performance of promptness in resolving customer complaints in (billing related) quarterly reports**

Report items	Total for 3 months of the reporting period	QoS Standards	Compliance
Number of complaints received			
Number of complaints resolved			
Resolved within 3 business days		Not less than 60.0%	Yes/ No
Resolved within 5 business days		Not less than 90.0%	Yes/ No
Resolved within 15 business days		Not less than 95.0%	Yes/ No

b. Non-billing related complaints

**Table 10: Format for performance of promptness in resolving customer complaints in (non-billing related) quarterly reports**

Report items	Total for 3 months of the reporting period	QoS Standards	Compliance
Number of complaints received			
Number of complaints resolved			
Resolved within 3 business days		Not less than 60.0%	Yes/ No
Resolved within 5 business days		Not less than 90.0%	Yes/ No
Resolved within 15 business days		Not less than 95.0%	Yes/ No

\* No. of complaints resolved as per the template refers to the number of complaints resolved regardless of the number of days it took to resolve the complaints.

32. Service provider shall submit quarterly reports on the unresolved complaints excluded from the above report as per the following format:

**Table 11: Format for excluded (from Table 9 & Table 10) unresolved complaints in quarterly reports**

	<b>Exclusion</b>	<b>No. of unresolved complaints excluded from the computation for 3 months of the reporting period</b>
1.	Damage to network facility due to force majeure or by third parties.	
2.	Customer premises inaccessible.	
3.	Faulty Customer Premise Equipment (CPE), customer infrastructure or internal wiring.	
Total		

**PROMPTNESS IN ANSWERING CALLS TO CUSTOMER HOTLINE**

33. Service Provider shall submit quarterly reports on promptness in answering calls to Customer Hotline as per the following format:

**Table 12: Format for promptness in answering calls to Customer Hotline in quarterly reports**

<b>Report items</b>	<b>Total for 3 months of the reporting period</b>	<b>QoS Standards</b>	<b>Compliance</b>
Number of calls opted for human operator			
Number of calls answered by human operator			
Answered within 20 seconds			
Answered within 40 seconds			
% answered within 20 seconds		At least 80.0%	Yes/ No
% answered within 40 seconds		At least 90.0%	Yes/ No

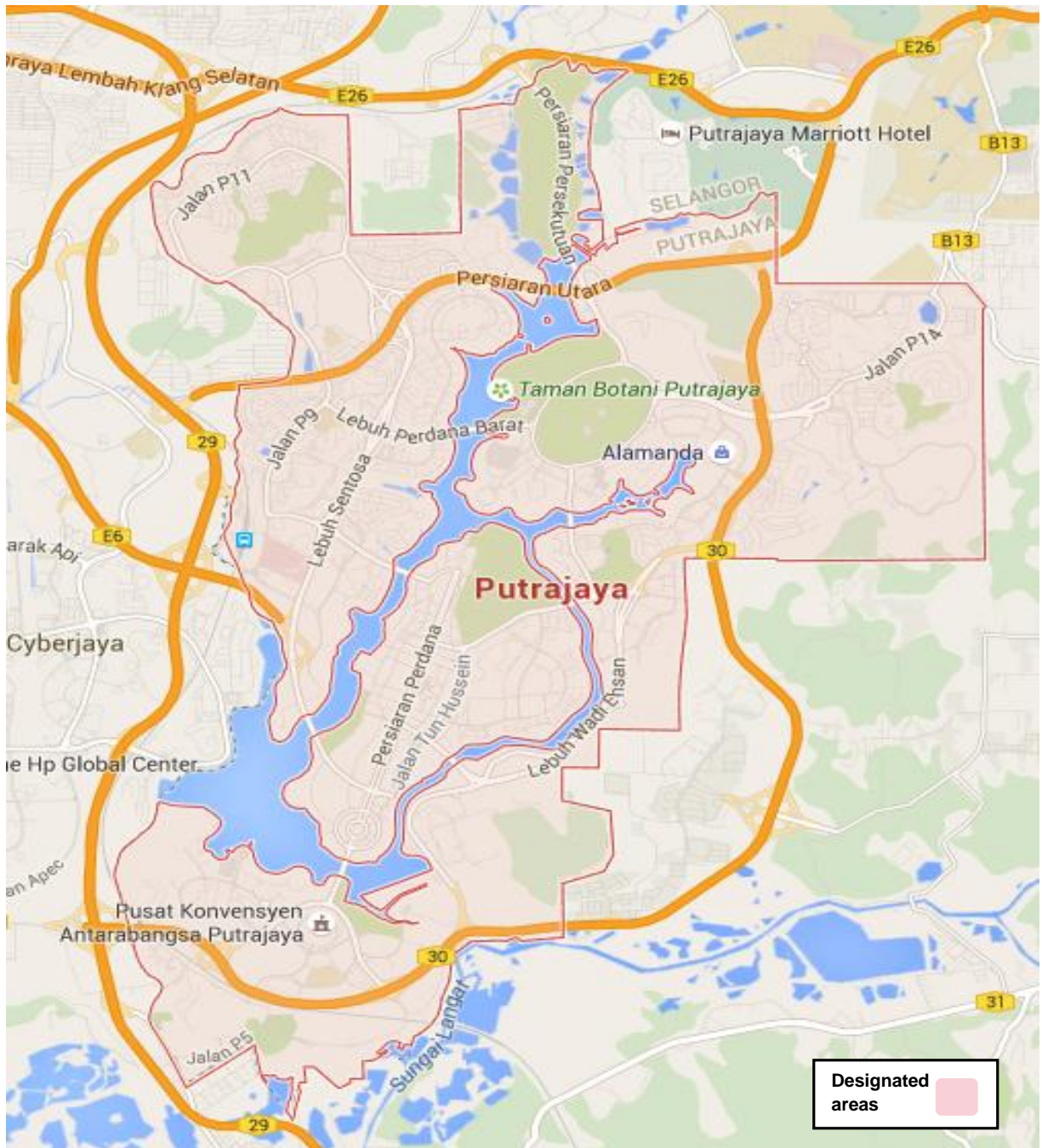
## **PART E: EFFECTIVE DATE AND COMMISSION CONTACT**

34. These guidelines shall come into effect on 1 January 2016, and shall continue to be effective unless modified, varied or revoked by the Commission.
35. These guidelines shall replace the Guideline on the Testing Procedure for Endpoint Service Availability and Dropped Calls issued by the Commission in 2013 pursuant to the Variation to Commission Determination on the Mandatory Standards for Quality of Service (Public Cellular Service) (Determination No. 2 of 2002) - Determination No. 1 of 2013.
36. For any queries and further information on these Guidelines please contact:
  - a. **In respect of Network Performance Quality of Service:**  
Service Quality and Spectrum Operations Division  
Phone : 03-8688 8000
  - b. **In respect of Customer Service Quality of Service:**  
The Monitoring & Compliance (Communications) Department  
Phone : 03-8688 8000  
Email : [qos.admin@cmc.gov.my](mailto:qos.admin@cmc.gov.my)

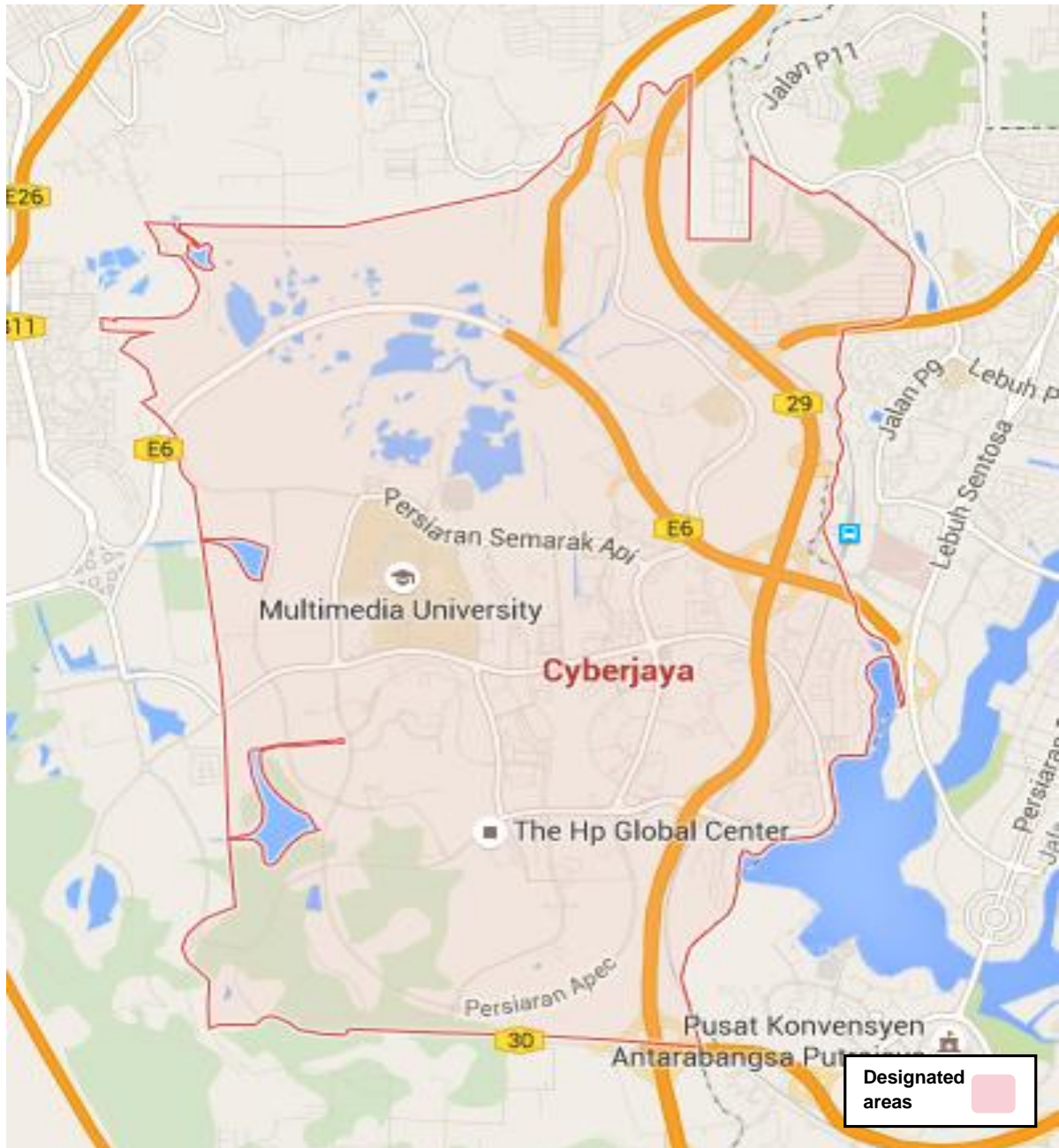
**DETAILED MAPS OF THE DESIGNATED ROUTES AND AREAS**

The designated routes and areas are as follows:

- a. Selected routes and areas in Putrajaya.

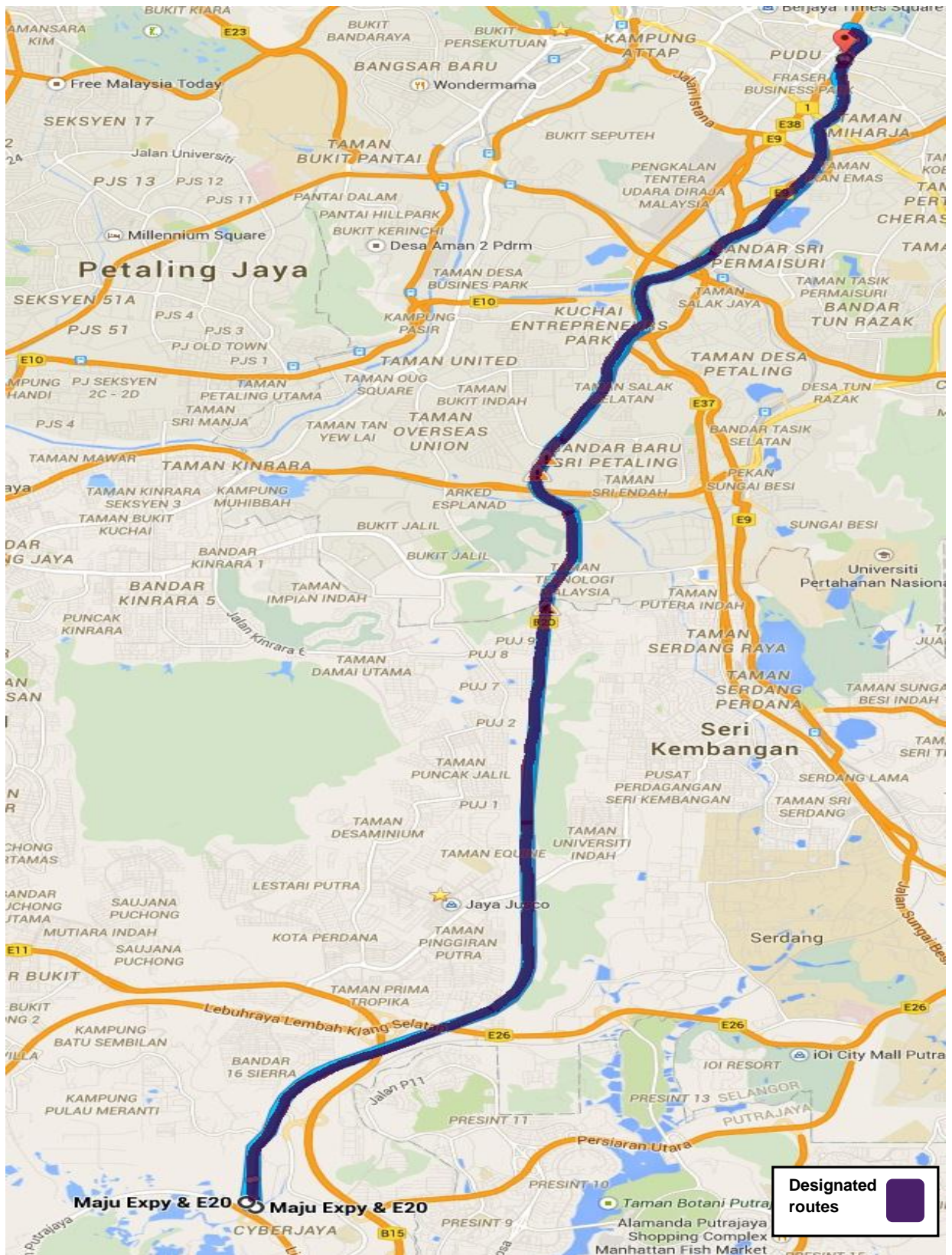


b. Selected routes and areas in Cyberjaya.



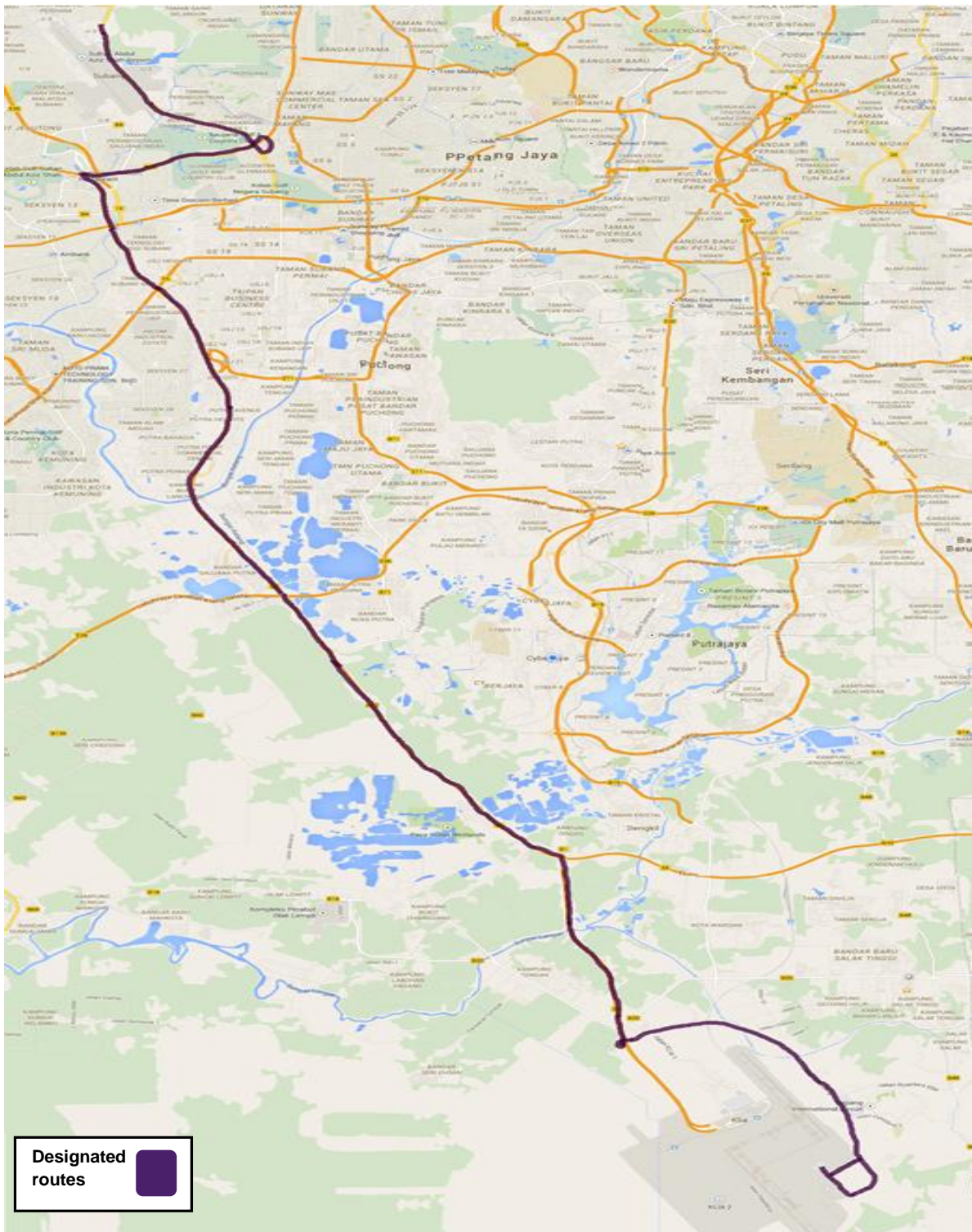


c. Maju Expressway (both ways).





- d. Selected routes from Kuala Lumpur International Airport (KLIA) to Sultan Abdul Aziz Shah (Subang) Airport via ELITE Highway.



- e. Selected routes from Sultan Abdul Aziz Shah (Subang) Airport to Jalan Duta via North Klang Valley Expressway (NKVE).

