REQUEST FOR EXPRESSION OF INTEREST
TO OPERATE MOTOR VEHICLE EXAMINATION STATIONS

MSI Building
Les Cassis
Port Louis

23 March 2011
1.0 Introduction

1.1 Vehicle examination aims at ensuring roadworthiness of motor vehicles and trailers. The Road Traffic Act and relevant regulations provide for such requisite. In particular, the Road Traffic (Control of Vehicles Emissions) Regulations 2002 and the Road Traffic (Construction and Use of Vehicles) Regulations 2010 set the vehicular compliance criteria towards the prescribed requirements.

1.2 The National Transport Authority (NTA) currently operates two vehicle examination stations. One is located in the North-West of the island, at Plaine Lauzun in the district of Port-Louis. The other one is found at Forest Side, nearly in the centre of the island, in the district of Plaines Wilhems. The present arrangements at both stations are by no means adequate to ascertain the reliability and genuineness of vehicular examinations with the daily high attendance records of vehicles. Vehicles, apart from auto cycles, have to undergo periodical inspections as required under sections 14, 15 and 113 of the Road Traffic Act prior to the renewal of the test certificate, certificate of fitness and motor vehicle licence (road tax).

1.3 With a view to meeting comparable international examination norms, improving the current examination methods and the present examination standards and ensuring objectivity requirement in examination, the present system has to be completely overhauled, if not, replaced by one which is more responsive. Objectivity in vehicular examination should be exercised at all times and this shall be possible only through a fully new automated and computerized system. In order to achieve a performance-based, modern, reliable and trustworthy system, Government has decided that the activities of the examination of vehicles be outsourced to private operators. It is thus proposed that private sector operates a maximum of four stations including the two existing ones.

1.4 This document adjuncts the invitation for ‘Expression of Interest’ and acts as a complete guide to enable interested parties, be they corporate bodies or consortium of corporate bodies registered, incorporated or established in Mauritius, to express their interest to operate motor vehicle examination stations in Mauritius. Only pre-qualified entities shall be informed to submit their Requests for Proposal thereafter.

1.5 The following annexes are included as basic information and requirements, onto which interested parties could source themselves to submit their ‘Expression of Interest’.

   Annex A  Basic vehicle examination requirements
   Annex B  Background information
   Annex C  Guideline for a Traffic Impact Assessment

1.6 Interested parties are informed that the present document provides for the minimum requirements to operate a motor vehicle examination station and have the liberty to propose any better options, including any concession period.

2.0 Profile of a private operator

2.1 A private operator interested to operate a motor vehicle examination station shall be a corporate body or a consortium of corporate bodies which –

   (a) have proven experience in the examination of motor vehicles; or
   (b) can demonstrate the ability to source the required expertise in vehicle examination.
3.0 System planning

3.1 A vehicle examination station shall have a customer room/lounge, front desk/reception area with appropriate lavatory facilities and at least four examination lines to examine all categories of vehicles. All relevant installation shall be properly designed to ensure compliance with statutory requirements.

3.2 A station shall be designed, constructed and maintained so as to ensure adequate safety, hygiene and environmental standards. Special attention shall be given to such aspects as protection against noise and smoke emissions.

3.3 The new system shall be completely automated and computerized. This approach shall provide for efficient and effective on-line links among the different examination stations. The National Transport Authority shall form part of the network so as to facilitate timely retrieval of examination data and results updates from any of the stations, at any given time. This coordinated process shall allow any vehicle examined for the first time at one station to undergo subsequent examinations at any other station for sake of better convenience.

3.4 At an examination station, the motor vehicle examination line shall be an automated system that controls different testers, compares the tester measurements with applicable criteria, makes pass/fail determination from the comparison result and prints the measurements and examination result on a specified data sheet. The examination line shall consist of different examination blocks. The driver of a vehicle subject to examination shall operate the vehicle during the examination according to instructions shown on a line indicator in each of the examination block and the instructions given by the vehicle tester. Measurements of the examination testers will be connected on-line to a computer.

3.5 For the purpose of the above, a multi-stage integrated computerized examination shall be required. The examination line shall be able to examine a few vehicles simultaneously and independently. The various stages for the examination line envisaged shall be as follows, but not limited to same:

(a) Vehicle identity and above-carriage check;
(b) Alignment (side slip) and brake tests;
(c) Braking, headlight and emission tests; and
(d) Under-carriage examination.

3.6 Individual computerized test equipment at each stage shall be integrated to a system controller. The test data shall be automatically collated by the system controller. The test data shall be used for statistical, operational analysis and archive for future reference. The station server shall be able to link to the central server/computer located at the NTA for downloading of information.

4.0 System maintenance/start-up

4.1 The equipment should be self-diagnosing and self-calibrating when powered-up. It should also perform the automatic calibration and zero check on emission/smoke testers connected.

4.2 Calibration tools and calibration procedure handbook for each set of test equipment should be provided. The full range of test equipment used in the maintenance, troubleshooting and programming of the examination line should also be provided.

4.3 Consistency checks on all automatic tests after start-up routines should be conducted.
5.0 Specification of testers and peripheral equipment

5.1 A signal light shall indicate when a lane is ready to accept another vehicle for examination. The indicator could also be used when the lane is non-operational.

5.2 For an integrated examination line, there should be provisions for data entry and enquiry. There may be requirements to modify provisions from the manufacturer’s standard to suit local requirements.

5.3 There shall be a display panel to indicate the progress of each examination process. The panel should provide instructions/prompts to the vehicle tester performing the examination. It shall also display the overall result of each examination sequence.

5.4 There shall be provision for the results of items that are examined manually to be integrated with the results of examination carried out by other test equipment.

5.5 For an integrated test line, the system controller shall control and co-ordinate the various examination processes along the examination lane. It shall also integrate test data of various examinations carried out for the vehicle before communicating them for storage in a host computer. There shall be provision for easy setting/selecting judgmental values for pass/fail and classification of major/minor failures. Such provisions shall be necessary to keep pace with changes in examination standards.

5.6 Examination results and other details pertaining to a vehicle as regard the under-mentioned testers shall similarly blend into the system:

(a) Side-slip tester and wheel alignment tester;
(b) Brake tester;
(c) Gas tester for petrol engine vehicles; and
(d) Diesel smoke tester for diesel engine vehicles.

5.7 An examination pit shall be used for examining the under-carriage of vehicles. There shall be a forklift to raise the vehicle tester to a suitable height for examination.

5.8 The test system shall be user-friendly. Clear instructions to the driver shall be displayed on screens that will allow him to stay in the vehicle during the test.

6.0 Test equipment

6.1 The various types of examinations and tests can generally be classified two-folds. They are machine-aided tests and manually/visually performed inspections. Recommended tests that should be performed with the assistance of test equipment are as follows, but not limited to same:

(a) Side-slip/wheel alignment test (side-slip tester).
(b) Braking efficiency test (roller brake tester).
(c) Sound level test (sound level tester).
(d) Headlight alignment and luminous intensity test (headlight alignment tester).
(e) HC-CO emission test (exhaust emission tester).
(f) Glass tint checking test.
(g) Speed limiter check.
(h) Speedometer accuracy checking test (speedometer tester).
(i) Chassis dynamometer smoke test.
6.2 Examinations that can be performed manually are above-carriage and under-carriage inspection.

6.3 Vehicles from 4x2 and 4x4 constant drive and 6x4 configurations or any other configuration shall be capable of being inspected.

7.0 **General scope of deliverables and requirements**

7.1 Submit relevant Traffic Impact Assessment report as per the guideline at Annex C.

7.2 Submit an Environment Impact Assessment as per EIA guidelines.

7.3 Proven evidence of experience in vehicle examination shall have to be provided, including brochures, description of assignments of similar nature and availability of appropriate skills among staff.

7.4 Start infrastructural works as soon as possible but not later than 3 months upon the grant of a licence and complete the construction of a station, commission it and its facilities within 18 months. With regard to the existing examination centres, they shall be operational within 6 months upon a licence being granted.

7.5 Set up the station along with its accessories on a plot of land of at least 4,000 square metres (approximately 1 acre), in area, at a location which may be determined by the NTA.

7.6 Ensure that all the examination equipments used in a station are from reputable suppliers.

7.7 Provide all necessary computer connections such as modem, telephone lines at the stations to facilitate transfer of data/report to the NTA and to bear all costs of the necessary software for such transfer.

7.8 Provide efficient and quality examination service to motor vehicle owners at all times.

7.9 Provide a very secure means of protecting examination reports and examination result retrieval.

7.10 Employ appropriate qualified and duly trained staff with at least one mechanical engineer registered with the Council of Registered Professional Engineers at an examination station.

7.11 Provide all facilities for the Commissioner or his representative to have access to the examination station in order to examine the work being carried out under a licence. The Commissioner shall have the right to post his representative at the station as and when the need arises.

7.12 A fee representing 10 % of the prescribed fee of each vehicle examined shall be paid to the Government of Mauritius.

8.0 **Schedule of work**

8.1 The hours of operation of a vehicle examination station shall normally be from 08h00 to 17h00 on weekdays and from 08h00 to 12h00 on Saturdays except Sundays and public holidays. However, interested parties are encouraged to propose better and flexible alternatives.

9.0 **Criteria for pre-qualification**

9.1 Only pre-qualified, interested parties shall be invited to submit their detailed proposals through a Request for Proposal. Expressions of Interest shall only allow the NTA to pre-
qualify a party based on necessary demonstrated ability and capacity to operate an examination station. The following must-comply criteria shall therefore be used for this assessment:

<table>
<thead>
<tr>
<th>Must-comply Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Operator’s general proven experience in the operation of a vehicle examination station or ability to source the required expertise in vehicle examination.</td>
</tr>
<tr>
<td>2 Demonstrate thorough understanding of the system planning.</td>
</tr>
<tr>
<td>3 Adequacy of proposed work plan and approach to meet the requirements set in this document.</td>
</tr>
<tr>
<td>4 Ability to employ the requisite staff and mechanical engineer.</td>
</tr>
<tr>
<td>5 Proposed land availability as per requirement.</td>
</tr>
</tbody>
</table>

9.2 Non-responsive parties will not be considered for invitation to submit a Request for Proposal.

9.3 The National Transport Authority reserves the right not to proceed with the Request for Proposal without thereby incurring any liability.

9.4 Expressions of Interest shall be submitted in a sealed envelope clearly marked on the top left hand corner “Expression of Interest – Setting Up of Vehicle Examination Stations” to the address below not later than Friday 22 April 2011 at 14h00.

The Road Transport Commissioner
National Transport Authority
MSI Building
Les Cassis
Port-Louis
Annex A

1.0 Vehicle examination requirements

1.1 This section deals with the basic requirements for the examination of a vehicle at a centre. Necessary equipment of acceptable international standards shall be used wherever applicable. Otherwise, the vehicle tester shall demonstrate proven technical know-how and experience to perform the examination of a vehicle as set herein.

1.2 For the purpose of an examination of a motor vehicle, all parts of the vehicle and its equipment and accessories shall be examined under sufficient lighting conditions and, where it is necessary to do so, the vehicle shall be placed over an inspection pit, or elevated or be placed on a hoist or ramp so as to enable an efficient carrying out of the examination of all its parts, equipment and accessories. No vehicle shall be dismantled for the purpose of an examination.

2.0 Audible warning instrument requirements

The vehicle tester shall ensure that a vehicle is equipped with an instrument capable of giving an audible and sufficient warning of its approach or position.

3.0 Bodywork and suspension requirements

The vehicle tester shall ensure that no part of the vehicle’s bodywork or suspension is affected by rust or is otherwise so damaged that the proper functioning of the braking system or steering gear of the vehicle is likely to be adversely affected by reason thereof. The examination shall be a visual one of the vehicle with particular attention to the underside.

4.0 Braking requirements

4.1 The vehicle tester shall ensure that -

(a) The braking systems are in good mechanical condition.
(b) The braking systems are properly adjusted to operate in accordance with the braking requirements.
(c) There is no such lack of balance in the application of the brakes to the wheels as to cause, or be likely to cause, serious deviation of the vehicle from its course.
(d) There is no evident defect in the vehicle or its equipment as a result of which any of the braking requirements is likely not to be complied with.

4.2 The examination of the braking systems of the vehicle shall include:

(a) A test of the efficiency of its brakes to ascertain whether they have the requisite braking efficiency prescribed by its braking requirements;
(b) A test carried out –

(i) by placing the vehicle on any suitable brake testing apparatus and using it to measure the braking force which is developed when the brakes are applied and, by expressing that force when expressed as a percentage of the weight of the vehicle (including any person or load carried in the vehicle at that time), to determine whether the brakes have the requisite braking efficiency;
(ii) when the brake testing apparatus is not working properly, by applying the brakes when the vehicle is being driven on the road or any other suitable place, and by using
a suitable decelerometer to determine whether the brakes have the requisite braking efficiency.

4.3. Where a motor vehicle with at least 4 wheels has 2 means of operating its brakes, and -

(a) each means of operation applies brakes to at least 4 wheels, the brakes, as applied by one of the means, must have a total braking efficiency of not less than 50 percent and the brakes, as applied by the other means, must have a braking efficiency of not less than 20 percent or

(b) only one of the means of operation applies brakes to at least 4 wheels, the brakes, as applied by the means, must have a total braking efficiency of not less than 50 percent and the brakes, as applied by the other means, must have a braking efficiency of not less than 20 percent.

4.4 The braking effort between wheels on any side of a vehicle that is out of balance shall not be more than 15 percent.

4.5 Where a motor vehicle with less than 4 wheels has only 2 means of operating its brakes as applied by any one of the means must have a total braking efficiency of not less than 50 percent.

4.6 A ‘brake testing apparatus’ means an apparatus designed and constructed to measure the braking force developed when the brakes of a motor vehicle are applied.

4.7 A ‘decelerometer’ means an apparatus designed and constructed to measure the braking efficiency of a motor vehicle when applied while the vehicle is being driven.

5.0 Direction indicator requirements

Apart from colour specifications of indicators, among other construction and use requirements, the vehicle tester shall ensure that where the indicators are equipped to show a flashing light, the rate of such flashing is not less than 60 and not more than 120 flashes per minute.

6.0 Exhaust requirements

The vehicle tester shall ensure that vehicles should comply with the provisions of the Road Traffic (Control of Emissions) Regulations 2002.

7.0 Light requirements

7.1 Among other testing of a vehicle through observance, the vehicle tester shall ensure that the examination includes a test to determine whether the beam of light emitted from each of the head lamps, when the vehicle is being driven on a road during the hours of darkness:

(a) is incapable of causing any dazzle or can be deflected so that it is incapable of causing any dazzle; or

(b) can be extinguished by the operation of a device which, at the same time -

(i) causes another beam of light to be emitted from that lamp;

(ii) deflects the beam of light from another lamp, or

(iii) causes another lamp to emit a beam of light

in such manner that the beam of light so emitted or deflected does not cause any dazzle.
7.2 Any apparatus designed and constructed for the purpose of ascertaining, within reasonable limits of precision, the direction of the beam of light from such lamp may be used.

8.0 Seat belt requirements

8.1 The vehicle tester shall ensure that -
   (a) seat belts provided in the motor vehicles are in good and efficient condition;
   (b) seat belts are securely attached to the seat for which they are provided and to the structure of the vehicle; and
   (c) all load-bearing members of the structure of the vehicle or panelling within 30 centimetres of an anchorage point are in a sound condition.

8.2 Any apparatus designed and constructed for the purpose of ascertaining, within reasonable limits, the efficiency of an anchorage point may be used.

9.0 Speedometer and speed limiter requirements

The vehicle tester shall ensure that –
   (a) the motor vehicle is equipped with an instrument capable of indicating the speed at which a motor vehicle is being driven;
   (b) the seals affixed to a speed limiter have not been removed or tampered with; and
   (c) the speedometer and the speed limiter are in good working order, advantageously by means of appropriate apparatus.

10.0 Steering requirements

The vehicle tester shall ensure that –
   (a) the steering gear is in good mechanical condition and is properly adjusted to operate as intended by its design;
   (b) the front wheel bearings are in good mechanical condition and are properly adjusted and;
   (c) there is no defect in the vehicle or its equipment as a result of which any of the steering requirements are not to be complied with. Appropriate equipment shall be used to the effect.

11.0 Tyre requirements

The vehicle tester shall have thorough experience in assessing the tyre fabric, defects and sign of any re-cut pneumatic tyre, amongst other roadworthy characteristics of a tyre.

12.0 Windows, windscreen and mirrors requirements

The vehicle tester shall ensure that, among other safety aspects, the vehicle complies with the prescribed limits for visual light transmission. Appropriate equipment shall have to be used.
Annex B

1. Interested private sector operators are supplied with background information as listed hereunder in view to facilitate their understanding on the local vehicular characteristics. Further information can be obtained from the Central Statistical Office, posted on the Government of Mauritius website at: http://www.gov.mu/portal/site/cso

   Table B.1 — Vehicles Registered in Mauritius, 2000–2010
   Table B.2 — Projected Vehicle Fleet, 2010–2025
   Table B.3 — Present Frequency of Examination at Plaine Lauzun and Forest-Side
   Table B.4 — Present Examination Fees

### Table B.1 - Vehicles Registered in Mauritius, 2000 – 2010

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2003</th>
<th>2006</th>
<th>2010</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cars</td>
<td>49,870</td>
<td>62,545</td>
<td>85,050</td>
<td>120,440</td>
<td>141.5</td>
</tr>
<tr>
<td>Dual-purpose vehicles</td>
<td>34,910</td>
<td>39,385</td>
<td>43,220</td>
<td>48,270</td>
<td>38.3</td>
</tr>
<tr>
<td>Heavy motorcar</td>
<td>915</td>
<td>960</td>
<td>1,120</td>
<td>1,250</td>
<td>37.7</td>
</tr>
<tr>
<td>Taxis</td>
<td>5,040</td>
<td>5,980</td>
<td>6,860</td>
<td>6,925</td>
<td>37.4</td>
</tr>
<tr>
<td>Vans</td>
<td>18,805</td>
<td>22,495</td>
<td>24,520</td>
<td>25,915</td>
<td>37.8</td>
</tr>
<tr>
<td>Lorries</td>
<td>10,485</td>
<td>11,500</td>
<td>12,270</td>
<td>13,185</td>
<td>25.7</td>
</tr>
<tr>
<td>Prime Movers</td>
<td>320</td>
<td>370</td>
<td>435</td>
<td>595</td>
<td>85.9</td>
</tr>
<tr>
<td>Trailers</td>
<td>1,725</td>
<td>1,770</td>
<td>1,755</td>
<td>1,820</td>
<td>5.5</td>
</tr>
<tr>
<td>Buses</td>
<td>2,395</td>
<td>2,460</td>
<td>2,610</td>
<td>2,845</td>
<td>18.8</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>24,525</td>
<td>26,745</td>
<td>33,935</td>
<td>48,655</td>
<td>98.4</td>
</tr>
<tr>
<td>Auto cycles</td>
<td>91,955</td>
<td>98,860</td>
<td>104,240</td>
<td>110,675</td>
<td>20.3</td>
</tr>
<tr>
<td>Other</td>
<td>3,065</td>
<td>3,305</td>
<td>3,420</td>
<td>3,540</td>
<td>15.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>244,010</td>
<td>276375</td>
<td>319,435</td>
<td>384,115</td>
<td>57.4</td>
</tr>
</tbody>
</table>

2. Table B.1 shows the growth of vehicle ownership over the last 10 years from 2000. There has been a sharp growth in the number of cars. Car ownership has grown at 14 %. Motorcycles have increased at about 10 % per annum and two-wheelers constitute nearly 41 % of the total fleet of vehicles. Lorries and vans have grown at about 2.6 % and 3.8 % respectively. However, the growth in the number of buses was only 1.9 %. The total fleet of road vehicles has grown at an annual average of 5.8 % in the last 10 years.
### Table B.2 - Projected Vehicle Fleet, 2010 - 2025

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cars</td>
<td>120,440</td>
<td>156,460</td>
<td>199,675</td>
<td>254,840</td>
<td>115.6</td>
</tr>
<tr>
<td>Dual-purpose vehicles</td>
<td>48,270</td>
<td>53,350</td>
<td>60,350</td>
<td>68,270</td>
<td>41.4</td>
</tr>
<tr>
<td>Heavy motorcar</td>
<td>1,250</td>
<td>1,575</td>
<td>1,705</td>
<td>1,825</td>
<td>46.0</td>
</tr>
<tr>
<td>Taxis</td>
<td>6,925</td>
<td>7,150</td>
<td>7,280</td>
<td>7,350</td>
<td>6.1</td>
</tr>
<tr>
<td>Vans</td>
<td>25,915</td>
<td>28,045</td>
<td>30,520</td>
<td>33,365</td>
<td>28.7</td>
</tr>
<tr>
<td>Lorries</td>
<td>13,185</td>
<td>14,950</td>
<td>16,050</td>
<td>17,100</td>
<td>29.7</td>
</tr>
<tr>
<td>Prime Movers</td>
<td>595</td>
<td>685</td>
<td>770</td>
<td>850</td>
<td>42.8</td>
</tr>
<tr>
<td>Trailers</td>
<td>1,820</td>
<td>1,865</td>
<td>1,890</td>
<td>1,930</td>
<td>5.8</td>
</tr>
<tr>
<td>Buses</td>
<td>2,845</td>
<td>2,890</td>
<td>2,940</td>
<td>2,995</td>
<td>6.0</td>
</tr>
<tr>
<td>Motorcycles</td>
<td>48,655</td>
<td>55,380</td>
<td>65,675</td>
<td>77,970</td>
<td>60.2</td>
</tr>
<tr>
<td>Auto cycles</td>
<td>110,675</td>
<td>115,400</td>
<td>120,685</td>
<td>126,125</td>
<td>13.9</td>
</tr>
<tr>
<td>Other</td>
<td>3,540</td>
<td>3,885</td>
<td>4,185</td>
<td>4,510</td>
<td>27.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>384,115</strong></td>
<td><strong>441,635</strong></td>
<td><strong>511,725</strong></td>
<td><strong>597,130</strong></td>
<td><strong>55.4</strong></td>
</tr>
</tbody>
</table>

3. The projected number of vehicles for the period 2010 - 2025 is given in Table B.2. It is based on the Trend Analysis and the Income Analysis.

4. The growth in private cars will slow down to an average of 5.5 % per annum and the number of cars will reach some 255,000 by 2025; i.e. an ownership rate of 212 cars/1000 population.

5. The overall growth rate averages 3.7 per annum.
### Table B.3 – Present Frequency of Examination

<table>
<thead>
<tr>
<th>Types of vehicle</th>
<th>Age of vehicle</th>
<th>Frequency of inspection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycles</td>
<td>Between 5 and 10 years</td>
<td>Every 3 years</td>
</tr>
<tr>
<td></td>
<td>Over 10 years</td>
<td>Every 2 years</td>
</tr>
<tr>
<td>Motorcars (Private)</td>
<td>Between 7 and 11 years</td>
<td>Every 2 years</td>
</tr>
<tr>
<td></td>
<td>Over 11 years</td>
<td>Yearly</td>
</tr>
<tr>
<td>Public buses</td>
<td>Up to 3 years</td>
<td>Every 18 months</td>
</tr>
<tr>
<td></td>
<td>Above 3 years</td>
<td>Yearly</td>
</tr>
<tr>
<td>Taxis/ Contract buses/ Contract cars</td>
<td>Up to 6 years</td>
<td>Every 18 months</td>
</tr>
<tr>
<td></td>
<td>Above 6 years</td>
<td>Yearly</td>
</tr>
<tr>
<td>Vans/ Dual-purpose vehicles</td>
<td>Up to 6 years</td>
<td>Every 18 months</td>
</tr>
<tr>
<td></td>
<td>Over 6 years</td>
<td>Yearly</td>
</tr>
<tr>
<td>Lorries/Tractors/Trailers/ Prime movers</td>
<td>Up to 5 years</td>
<td>Yearly</td>
</tr>
<tr>
<td></td>
<td>Over 5 years</td>
<td>Every 6 months</td>
</tr>
</tbody>
</table>

### Table B.4 - Present Examination Fees

<table>
<thead>
<tr>
<th>Types of vehicle</th>
<th>Prior to May 2007 (Rs)</th>
<th>As from May 2007 (Rs)</th>
<th>As from January 2011 (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorcycles</td>
<td>50</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Motorcars/Dual-purpose vehicles/Taxis</td>
<td>100</td>
<td>200/200/100</td>
<td>400/400/300</td>
</tr>
<tr>
<td>Public buses/Contract buses</td>
<td>150</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>Motor tractors/Locomotives/Trailers/ Goods vehicles/Heavy vehicles/Heavy motorcars</td>
<td>100/150</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>Motor vehicles used for teaching of driving</td>
<td>100</td>
<td>200</td>
<td>400</td>
</tr>
</tbody>
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GUIDELINES TO PREPARE A TRAFFIC IMPACT STUDY REPORT

To provide consistency among individual applicants, this guide shall be used to prepare a Traffic Impact Study Report. Purely as an indication, the format in which the report shall be presented, in contents, for assessment and analysis shall be as hereunder set down.

Executive Summary

1. Description of existing/proposed site and adjacent properties.
2. Provide summary of traffic evaluations.
3. Provide summary table of road capacity evaluations.
4. Provide description of proposed mitigation, as applicable.

I. Introduction

A 1. Describe purpose of study.

B 2. Describe general study methodology.

II. Existing and Proposed Land Use

A 1. Describe size, general features and location of the site.
2. Provide figure displaying site in relation to study area and vicinity and identify large traffic generators within the area (a one kilometre radius from proposed site is usually recommended as the study area).

B 3. Describe any existing development on the site and how it would be affected by the development proposal.
4. Provide table displaying land area density by FAR, square footage, or size of project.

III. Existing and Proposed Transportation System

A 1. Inventory of existing signalized and non-signalized intersections within the study area.
2. Provide figure displaying the capacity operations of existing signalized and non-signalized intersections within the study area.
3. Identify signalized and non-signalized intersections within the study area that are planned for improvement by the project horizon year(s).

B 1. Provide figure displaying daily traffic counts for all intersections within the study area and provide peak hour turning movement counts for all such major intersections within that study area.
2. Identify source and year of traffic counts.
C
1. Identify horizon year(s) for traffic volumes
2. Provide figure displaying projected traffic volumes for all intersections within the study area for the appropriate horizon year(s)

IV. Site Traffic Characteristics
A
1. Identify full development allowed under existing land zoning (if applicable).
2. Provide table displaying appropriate daily, AM and PM peak hour trip generation rates by land use category.
3. Provide table displaying daily, AM and PM peak hour trip generation by land use category prior to any trip reductions.
4. Provide documentation for any trip reductions due to any by-pass or mixed-use development.
5. Provide table displaying daily, AM and PM peak hour trip generation by land use category, including trip reductions, if applicable.

B
1. Identify full development for the proposed project.
2. Provide table displaying appropriate daily AM and PM trip generation rates by land use category.
3. Provide table displaying daily, AM and PM peak hour trip generation by land use category prior to any trip reductions.
4. Provide documentation for any trip reductions due to any by-pass or mixed-use development.
5. Provide table displaying daily AM and PM peak hour trip generation by land use category, including trip reductions, if applicable.

C
1. Provide table displaying proposed trip generation minus existing trip generation.

D
1. Identify directional distribution assumptions, although computer modeling has been performed.
2. Provide figure displaying directional distribution of site traffic, although computer modeling has been performed.
3. Provide figure displaying AM peak hour assigned site traffic within the study area for base year conditions.
4. Provide figure displaying PM peak hour assigned site traffic within the study area for base year conditions.
5. Provide figure displaying AM peak hour assigned traffic within the study area for base year conditions, including existing traffic plus additional site-generated traffic.
6. Provide figure displaying PM peak hour assigned traffic within the study area for base year conditions, including existing traffic plus additional site-generated traffic.
7. Provide figure displaying total AM peak hour assigned traffic within the study area for horizon year conditions, including background traffic plus additional site-generated traffic.
8. Provide figure displaying total PM peak hour assigned traffic within the study area for horizon year conditions, including background traffic plus additional site-generated traffic.

V. Traffic Analysis

A
1. Identify capacity analysis technique utilized.
2. Provide figure for displaying lane assignments for capacity analyses for base year conditions.
3. Provide figure for displaying lane assignments for capacity analyses for horizon year conditions.
4. Perform AM and PM capacity analyses for existing conditions on all intersections and all major driveways serving the development within the study area.
5. Perform AM and PM peak hour capacity analyses for base year conditions on all intersections and all major driveways serving the site within the study area, including existing traffic plus additional site generated traffic.
6. Perform AM and PM peak hour capacity analyses for horizon year conditions on all intersections and all major driveways serving the site within the study area, including existing traffic plus additional site generated traffic.
7. Identify percentage of daily horizon year traffic assumed for peak hour.
8. Provide analysis sheets in appendix to report.

B
1. Identify locations studied.
2. Identify locations meeting warrants.
3. Identify impact of new signals on existing system performance.
4. Summarize traffic signal evaluation process.
5. Provide analysis sheets in appendix to report.

VI. Traffic Mitigation

1. Provide figure displaying location and type of mitigation.
2. Perform AM and PM peak hour capacity analyses for horizon year conditions on all intersections and driveways serving the site within the study area, including existing traffic plus additional site generated traffic.
3. Provide an evaluation of road safety with any necessary measures for horizon year conditions on all intersections and driveways serving the site within the study area, including existing traffic plus additional site generated traffic.
4. Summarize capacity evaluations.
5. Provide analysis sheets in appendix to report.
VII. Conclusions

1. Provide summary table of all intersections within the study area where the development would contribute 5% or more of the total AM or PM peak hour traffic during the base years.

2. Provide summary table of all intersections within the study area where the development would contribute 5% or more of the total AM or PM peak hour traffic during the horizon years.

3. Summarize any site access or circulation problems in the base year.

4. Summarize any site access or circulation problems in the horizon years(s).

VII. Recommendations

1. Describe proposed impact mitigation measures, if the development would cause any facility to exceed 80% of non-signalized junction capacity and/or 45% of signalized junction capacity; or where it already exceeds, the development would contribute to 5% or more of the total traffic during the project build-out year.

2. Provide figure displaying needed off-site improvements, if applicable.

3. Provide figure displaying needed on-site improvements, if applicable.

4. Identify benefits and/or improved capacities with implementation of the proposed mitigation measures.

5. Provide analysis sheets in appendix to report, if applicable.