CHAPTER 27: REMOVAL OF TRAFFIC SIGNALS

27.1 INTRODUCTION

1 Traffic operations at traffic signals should be periodically reviewed to establish whether the signal still meets the objectives of providing safe, convenient and affordable traffic control with a minimum of environmental side effects. This includes ensuring that the level of control at any junction is appropriate to the circumstances prevailing at that junction. For example, vehicles standing in queues at a junction without any cross flow are needlessly consuming energy, polluting the atmosphere with exhaust emissions and wasting time.

2 Warrants for the removal of a traffic signal are given in Chapter 2 of this manual (Volume 3). The traffic signal should be replaced by another more appropriate form of control such as a traffic circle when the removal of the signal is warranted.

3 In this chapter, attention is given to procedures that should be followed in removing traffic signals. It is important to note that, where design and signage would typically be geared to the needs of a driver unfamiliar with an area, removal of traffic signals would typically require attention being given to the needs of the familiar driver. The unfamiliar driver will respond to whatever circumstance confronts him or her at a junction, whereas the familiar driver is more likely to respond to whatever used to be the situation and not necessarily the changed situation.

27.2 IDENTIFICATION OF SIGNALS REQUIRING REMOVAL

1 The identification of signals requiring removal is more complex than the identification of locations where new signals are required. The reason for this is that signals will still operate fairly efficiently, even if they are no longer warranted.

2 It is possible to undertake regular comprehensive studies of all the junctions and crossings in the network to establish whether signals are still warranted. The cost of such studies, however, is high and such detailed studies are not required.

3 The queue length warrant used for justifying the removal of traffic signals is a relatively simple method of identifying possible locations for signalisation. If queues are generally short at a traffic signal, it may indicate that the signals are no longer warranted. It is, however, important to note that long queues at signals are not necessarily an indication that the signals are warranted – the long queues may be caused by poor traffic signal settings.

4 It is unlikely that signals on arterial roads carrying high volumes of traffic would have to be removed. It may be necessary to upgrade traffic signal settings to allow for increases in flows and changes in turning patterns.

5 The likely candidates for removal would be those on local roads carrying low volumes of traffic. In many cases, such signals were not warranted in the first place, or were only marginally warranted.

6 It is important to note that the removal of a traffic signal does not constitute an admittance that poor planning practices were applied, but rather that circumstances have changed. Urban areas are dynamic and control measures cannot remain static in time. Changes to the road network, in particular, can contribute significantly to such changes.

27.3 REMOVAL PROCEDURE

1 The removal of traffic signals should be undertaken with care. Drivers tend to be inattentive, and the sudden removal of traffic signals can result in traffic accidents. It is therefore essential that such drivers be made sufficiently aware of impending change.

2 The following procedure should be followed when removing traffic signals:

(a) Provide information to the public over a period of about 2 weeks. Install information road traffic signs containing information on the intended removal of the signals.

(b) Place signals in flashing mode for 1 or 2 days.

(c) Implement new form of control and mask traffic signals for a period of at least 7 days. A warrant study can be undertaken during this time to reconfirm whether signals are actually no longer required at the junction.

(d) Remove traffic signals together with any road and information signs.

3 Use should be made of all available avenues for informing the public of the impending removal of a traffic signal. These include press releases and radio announcements. Information signs should also be installed on each approach leg to a traffic signal. The date of removal should be given, possibly together with a countdown in days to the date of the intended removal.

4 It is essential that proper record be kept of the change process. This includes dated and properly annotated photographs of the junction throughout the process, commencing with the date at which the information signs were installed. Such records will be required in cases of accidents to indicate that due diligence and care have been taken.

5 The removal procedure provides for a warrant study as an additional measure of reconfirmation that existing signals are indeed no longer warranted. When it is found that the signals are indeed still warranted, alternative means of improving or upgrading the junction should, however, be explored before the signals are reinstalled.