Road Safety Guidelines

for the Asian and Pacific Region

4.11

TRAFFIC POLICE AND LAW ENFORCEMENT

Asian Development Bank

4.11

TRAFFIC POLICE AND LAW ENFORCEMENT

Traffic law enforcement is needed to encourage safer road use and an orderly traffic flow.

Most traffic police forces in the Asian and the Pacific region are characterized by insufficient training, minimal enforcement equipment or vehicles, and a high turnover in staff. Lack of mobility often results in a preoccupation with traffic control at junctions and inadequate attention has been given to the use of accident data in identifying enforcement priorities and targeting moving violations. Although staffing levels are often high, the lack of trained and experienced officers reduces substantially the potential effectiveness of such traffic police personnel.

Training is needed in many areas, including traffic management, accident investigation, highway patrolling, motorcycle riding and car driving, and management skills. Traffic police must be trained in both the technical tasks of policing and in how to set an example for the general public. Where possible, a career structure should be available in traffic policing to allow officers to specialize and make maximum use of their additional training. Control systems should be established to allow for the empowerment of junior level police officers while minimizing potential for abuse of power.

Modern enforcement equipment such as alcohol testing devices and radar speed detectors should be acquired. Traffic police personnel should be trained in their use and in related tactics and enforcement strategies.

PRIORITY ACTIONS NEEDED:

1. Traffic policing should be based on analysis of accident data and targeted to the roads and locations where accidents occur most frequently, and on the associated unsafe driver behaviors and moving offenses.

2. Traffic police training should be expanded and improved to create a specialist traffic police force skilled in use of modern enforcement equipment, tactics, and strategies, and with the ability to conduct targeted and effective enforcement campaigns.

3. Efficiency and activity indicators should be adopted to monitor performance, including the frequency of use and prosecutions resulting from modern enforcement equipment, such as alcohol testing devices and radar speed meters.

Traffic police must focus their attention on preventing road accidents. This is best done by having a well-trained, efficient organization that is adequately equipped with modern equipment and vehicles, and by concentrating on moving offenses and preventing unsafe driver behavior.

1 INTRODUCTION

These sector guidelines on "Traffic Police and Law Enforcement" are from a set of Guidelines on Road Safety for the Asian and Pacific Region policymakers, developed as part of a regional technical assistance project (RETA 5620: Regional Initiatives in Road Safety) funded by the Asian Development Bank (ADB).

The main objective of traffic policing is the safe and efficient flow of traffic, achieved through means of persuasion, prevention, and punishment.

2 WHY ARE TRAFFIC POLICE AND LAW ENFORCEMENT NEEDED?

As motor vehicles increase in numbers and in their power and capability, traffic conditions become harder for the average police officer to control. Specialized training is needed to ensure traffic police officers have a practical understanding of how best to achieve safety and an orderly flow of traffic on the road.

Traffic police training is expensive and it is not cost-effective to supply it as a part of basic training to all police officers. The duties of a traffic officer — dealing with fatal and serious road accidents, and reporting traffic offenses — do not appeal to all police officers. Furthermore, police driver training is a skill that, taken to high levels, is not within the capability of all police officers.

In industrialized countries, traffic enforcement has become the province of a nucleus of highly-trained specialist officers whose duty is solely the prevention of accidents, and the maintenance of smooth and orderly traffic flow. However, in developing countries, traffic police are largely untrained, unequipped, and poorly paid.

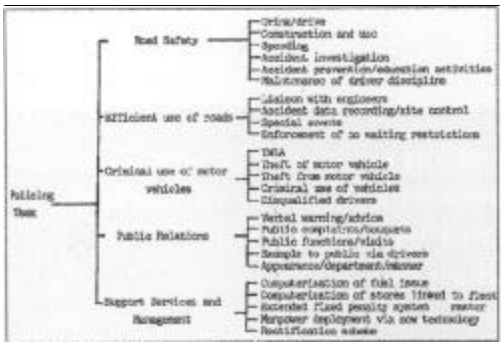

Figure 1: Traffic police sectors and activities.

There is an even greater need for trained and effective traffic police in developing countries due to the competing demands on scarce road space, a populace largely lacking in road safety awareness, and insufficient guidance provided to road users by road signs, markings, and facilities. On the streets, the traffic police are expected to compensate for any deficiency in traffic engineering while balancing different road use demands as diverse as child pedestrians and handcarts, overloaded trucks, and modern land cruisers. Specialized training becomes a necessity as the traffic police are held responsible for ensuring a safe and efficient road network under such challenging circumstances.

3 KEY COMPONENTS

The five key components are: organization, policy, training, vehicles, and equipment.

3.1 Organization

In industrialized countries, traffic police typically account for 8-10 percent of the total police budget and in the countries where traffic policing is particular strong (e.g., Japan), traffic police may account for 14-16 percent of the total police budget. In most developing countries, traffic police are often underfunded and underresourced, and are rarely allocated even 5 percent of police budgets. Limited resources require the efficient organization of the traffic police to maximize potential effectiveness.

Force strength is not usually a constraining factor as staffing, readily available in developing countries, is often used to compensate for lack of equipment and vehicles.

Organizational structure in the traffic police forces of developing countries has tended to be bottom heavy at the lowest levels, with many police officers not even empowered to cite traffic violations. Middle management, where analysis would normally be conducted, is often minimal and operational decisions often come from top management based on professional judgment alone rather than on systematic analysis of data.

In many countries, traffic police are transferred after two to three years and there is limited opportunity to advance or use any specialist training received. Career tenure has been introduced in some countries that allows officers to specialize in traffic policing and helps create a nucleus of experienced traffic police officers who become a valuable resource for their country.

In most countries, traffic police salaries are tied into the civil servants' pay scales and do not properly reflect the hazardous and demanding nature of the work. Traffic police are required to work long shifts on point duty in tropical climates, often for seven days a week. Leave entitlement is often restricted, which contributes to a high sick leave rate. Too much temptation and opportunity for corruption can exist within traffic policing and woefully inadequate salaries do not help.

3.2 Policy

With the wide range of traffic regulations and the limited amount of traffic police resources available, traffic enforcement efforts must be prioritized to suit local problems. A recommended order of offenses for consideration is as follows:

1) safety: offenses that could lead to a road accident, i.e., speeding, signal violations, drunk-driving violations, and pedestrian crossing violations by drivers;
2) traffic management: offenses that while not inherently dangerous do not facilitate smooth movement of traffic, i.e., illegal parking or buses loading and unloading passengers within a junction;
3) equipment: offenses such as lighting or tire defects that could contribute to an accident but have a much lower correlation with accidents than do the safety offenses; and
4) administrative: paperwork offenses such as improper vehicle registration or transfer of ownership.

Safety violations, or "moving" violations as they are sometimes called, should be targeted to focus enforcement efforts at actions most closely connected with road accidents. High-risk accident sites should also be targeted. As traffic regulations usually specify the maximum fine for each violation, safety violations should incur the maximum fine to highlight the seriousness of the offense.

3.3 Tactics

a) *Strategic plans and selective enforcement*

Enforcement priorities need to be clearly identified in a policy document such as a strategic plan. In recent years, strategic plans have been used to specify police forces' objectives and the actions intended to help achieve the stated objectives. Target deadlines should also be provided to allow monitoring of the work undertaken.

Selective enforcement, whereby safety violations are identified through accident data analysis and professional judgment, should provide the basis for staff deployment. Targeted enforcement campaigns, either stationary or mobile, should be undertaken with specified objectives and agreed methods of evaluating the effectiveness of the campaigns. Experience has shown many enforcement campaigns, such as holding a "Traffic Week," are too short and unfocused to have any lasting effect. Traffic police frequently underestimate the amount of time and effort it takes to educate road users.

b) *Verbal warnings*

Verbal warnings should be used, especially in the early stages of an enforcement campaign, when education and regulation compliance are the objectives rather than punishment. In motorized countries, the majority of traffic police interactions with the public result in verbal warnings with embarrassment and inconvenience seen as adequate deterrents. The aim should always be to deter bad behavior rather than to punish it.

c) *Staffing deployment*

The actual deployment of traffic police will be dictated by the numbers of vehicles available. The main traffic police functions are point duty, mobile patrolling, accident investigation, and road safety education.

In many developing countries, the vast majority of traffic police are assigned to stationary point duty for traffic control and management. However, much can be achieved by beat officers if they are stationed at high-risk sites. In countries where pedestrian accidents are a problem, traffic police could be used more effectively at pedestrian crossings to help platoon the pedestrians, as well as requiring vehicles to stop for pedestrians crossing.

Another example of how point duties could be used more effectively is through the staffing of shifts. Due to the physical demands, point duty is broken into several shifts over the day. But in many countries the staffing level is constant throughout the day. Additional traffic police should be timetabled to operate during busier hours and stationed at point duty during the peak hours for accidents and traffic congestion. This is now done in Nepal.

While a typical level of patrol coverage in the United Kingdom (UK) is shown in Table 1, the relative scarcity of patrol vehicles available in developing countries results in much larger patrol routes being assigned so police presence and hence deterrence effects on motorists are lower. Mobile patrolling, even with the vehicles available, is not always used to maximum effectiveness with general patrolling and crime-related duties often taking priority. As with point duty assignments, mobile patrolling should not be uniformly distributed throughout the day and over the network but should target roads and road sections that are most prone to road accidents.

Table 1: Traffic Patrol Coverage

Area	Road class	Time period	Level of patrol coverage
Urban	Trunk and 'A' Class	08.00- 00.00	One car and two motorcycles for every 20 miles (32 kilometers) of carriageway.
		00.00- 08.00	One car for every 30 miles of carriageway.
	Other	All	One car for every 200 miles of carriageway.
Rural	Motorways	08.00-00.00	One car for every 10 miles of road (20 miles of carriageway).
		00.00-08.00	One car for every 20 miles of road (40 miles of carriageway).
	All-purpose trunk roads	08.00-00.00	One car and one motorcycle for every 20 miles of route.
		00.00-08.00	One car for every 40 miles of route
	Other A and B Class	08.00-00.00	One car for every 80 miles of route
		00.00-08.00	One car for every 160 miles of route

Accident investigation responsibility is usually assigned to senior officers, if not a specialized unit. While accident investigation is conducted by general police in a few countries, it is desirable that this function is carried out by the traffic police so that they are able to give expert evidence in court cases involving serious accidents. They can and should be trained in accident investigation techniques and accident reconstruction methods[1].

Road safety education advice is usually a supplemental role for the traffic police and involves occasional talks and visits to schools. This should preferably be carried out in a complementary way to other road safety education efforts.

3.4 Training

Police in any country reflect the society in which they live and the traffic police in developing countries are no exception. Moreover, in many countries, traffic police are the general public's primary if not exclusive contact with the police force and the image of the police force relies on how well the traffic police conduct themselves. Training programs need to be capable of producing not only technically qualified but also professional officers with integrity who can present a good public image.

Lack of appreciation for the skills required by traffic policing has led to insufficient priority being given to training needs. Lack of training occurs at all levels and senior police officers are frequently transferred into traffic policing without receiving any previous traffic training. This approach is slowly changing as police officers realize that a small but well-trained police force empowered and capable of conducting focused enforcement campaigns is much more effective than a large force of limited use. It is also easier to expand upon a trained base.

Plate 1:
Appropriate vehicles must be used for traffic enforcement.

Training courses should be provided in traffic management and control (junior and senior level courses), traffic law, accident investigation, highway patrolling, speed control, and the use of breathalyzers. Driver and rider training, including basic maintenance, should be provided for all patrol officers. Traffic police training should provide courses in public relations and management skills. Sections 6 and 7 of these Sector Guidelines offer advice on the types and locations of courses that are undertaken by traffic police in developing countries.

3.5 Vehicles

Selection of motor vehicles for traffic patrol work should be on the basis of suitability for the task. An example of unsuitability would be the use of a high-powered saloon motor car, designed for performance on smooth surfaced roads, to undertake a general patrol on poorly maintained roads or unmade tracks. The suitability of solo motorcycles should also be considered with respect to the nature of the roads on which they are to be deployed.

Bicycles should be considered particularly for patrolling around town as they are more affordable (about one-hundredth the price of a patrol vehicle) and provide the patrol officer with the view from the nonmotorized perspective (in many Asian countries, nonmotorized vehicles are the predominant vehicle type). During most hours, cycle patrol speeds would be comparable to motorized vehicles, while response times could be increased or decreased depending on traffic congestion. Cycle patrols are common in some motorized countries and can be used to complement motor vehicle patrols.

Due to the benefits of having a conspicuous vehicle, it is recommended special standard colors and uniforms be adopted using contrasting shades, in colors appropriate to the area patrolled. Furthermore, it is recommended, that the uniform of the officers employed on traffic patrol duties be readily visible in order to increase conspicuity. This enables the public to see enforcement being undertaken and is a safety feature for the officer. In particular, it is recommended that fluorescent and reflective material be worn in poor weather and especially at night. To complement the contrasting colors of the marked vehicle, it is suggested that a flashing bar light or similar feature be fitted to the vehicle roof. This would display lights of the color associated with the police in the country concerned.

Patrol vehicles should also be equipped with accident rescue tools (to assist in the freeing of trapped victims), fire extinguishers, suitable articles to remove debris from the road surface, collapsible warning signs, and flashing beacons. Local decisions must be taken to evaluate what is the most necessary equipment for a given environment and any potential impact on the speed and handling of the vehicle.

3.6 Equipment

The safety of traffic police officers is paramount. The nature of their work is that they are always in a potentially dangerous environment in close proximity to moving traffic. Precautions must be taken to minimize risk of injury. An essential item is a highly conspicuous uniform, or at least one with which a high visibility vest can be worn in comfort.

Other items, such as smog masks, illuminated or reflective batons, and shading for officers engaged in lengthy periods of traffic control, will vary according to local conditions. Senior officers are urged to consider the needs and welfare of subordinates and supply the articles that are reasonably required for the conditions.

a) *Speed detection equipment*

Apart from protective clothing to ensure that they are not exposed to unnecessary danger when attending accidents or controlling traffic, traffic police also need to have modern equipment if they are to be able to do their job properly. This will include enforcement equipment, such as alcohol testers and radar speed guns. Some of the more sophisticated enforcement equipment is discussed below.

A wide variety of speed measuring equipment is available in varying degrees of sophistication. The enforcement of speed limits is a necessary road safety function, especially near locations where an accident problem has been identified with speed as a significant cause.

The simplest and cheapest method of measuring speed is to use a stopwatch and time a vehicle over a premeasured distance between two points. By applying the formula:

$$\text{SPEED} = \frac{\text{DISTANCE}}{\text{TIME}}$$

either by calculator or prepared time and distance tables, the speed can be calculated. This method is cost-effective, as the only requirement is a stopwatch and a suitable measuring device — either a tape measure or a measuring wheel — to set up the fixed site. It should be stressed that this method increases in accuracy as the measuring distance increases and a minimum of 100 meters (m) is recommended. As the distance increases beyond about 300 m (depending on the accurate depth of vision by the operator), the accuracy decreases. So the method is best used for measuring over fixed distances of 100 m to 300 m.

Speed offenses can also be detected by a radar gun, which is easily operated by one officer and gives a direct reading of a vehicle's speed. The inbuilt safety features ensure accuracy and prevent the device from giving a reading when more than one vehicle is within the beam. Used in appropriate circumstances and by appropriately trained personnel, the handheld radar is an effective speed detection tool.

There are various systems available (e.g., speed master, truvelo) that can be used as roadside fixed distance systems with a built-in timer that automatically records the time that the front wheels cross between two loops. The time value is compared automatically against the known distance to produce a speed value. The system is automatic and does not rely on human operation, so potential for operator error is eradicated. The device is suitable for level roads in good repair but not when the road surface is likely to destabilize the vehicle on the approach or between the timing loops, or on unmade tracks. A camera may also be attached to record the vehicle as it activates the loops.

Laser devices, such as the Laser 2000, produce a low intensity laser beam that can be aimed at approaching vehicles. The pinpoint of laser light is concentrated, not spread out as in radar devices. It is also visible through the device viewfinder, removing all doubt as to the identity of the target whose speed is being measured. It is possible to use this equipment in heavy traffic flows that would render the radar system inaccurate.

The types of equipment outlined above can, if vehicle resources are insufficient, be effectively operated by traffic personnel adopting a high-profile team approach where several police officers are deployed on foot in a small area in highly visible clothing and are seen to be undertaking accident prevention tasks such as speed detection and vehicle condition checks.

Where a vehicle suitable to undertake speed detection is available, speed enforcement can be undertaken by the method known as pursuit where the police vehicle follows the target vehicle at a fixed distance for a minimum distance (100 m or greater, depending on the distance that local courts and legislation are prepared to accept as proof). Evidence is presented by the officer that the speed of the followed vehicle was between the maximum of X kilometers per hour (km/h) and a minimum of Y km/h (the latter figure being in excess of the speed limit). It should be remembered that local legislation or legal precedent may require evidence to be given that the speedometer of

Plate 2 (above): Police spot checks on drunk-driving, note the reflective jackets worn for safety.

Plate 3 (right): Radar being checked before use.

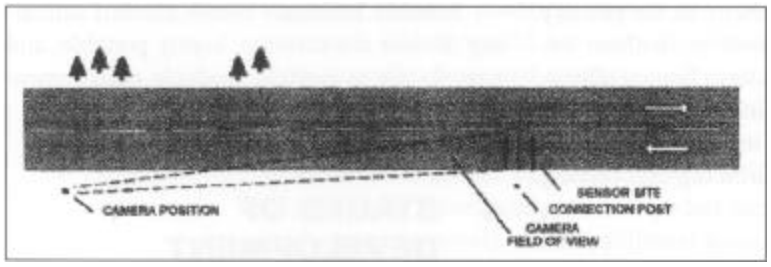

Figure 2:
Radar being checked before use.

Plate 4:
VASCAR system.

the police vehicle was accurate before and after the check. Some method of periodically checking the vehicle speedometer might be required, e.g., a rolling road (an expensive item to install and maintain).

The replacement of cable-driven speedometers with a type driven by electrical impulse allows the installation of a Visual Average Speed Computer And Recorder (VASCAR) type of device. This equipment can be easily calibrated by the driver of the police car by running the vehicle from stationary at a fixed point to a halt at another fixed point a known distance away. By imputing the distance into the device it can be recalibrated to ensure accuracy. Speeds can still be detected by pursuit, but a fixed distance is not required.

In developed countries, VASCAR and other similar devices can also provide inputs to video cameras mounted on police vehicles. These recorders run constantly while the police vehicle is in motion, recording the traffic scene in front of the police vehicle. In speed detection situations the vehicle is not only filmed but a real-time speed value is displayed. The recording of other serious driving offenses can also be recorded and the video used to support police evidence. It is also a useful road safety tool in that motorists can be stopped for poor driving and the video of the incident shown to highlight the deficiencies of driving style or the potentially dangerous situation entered into by the motorist.

b) *Automatic detection cameras*

These cameras are presently being introduced in many industrialized countries, either in 35 millimeter color film format or using electronic digital imaging. The use of these devices is usually a partnership between the highway authority, which provides and maintains the installation, and the police, who operate the system. The cameras are mounted in such a way as to observe the roadway at appropriate points. Offenses that can be detected are the failure to comply with a red traffic signal, either at a road junction or at a pedestrian crossing, or speed at a length of road where speed has been identified as a major cause of accidents. Such cameras can be positioned in front of or behind the site to record oncoming or receding traffic. The distance of the camera from the sensor site is determined by the camera optics used (see Figure 2).

The camera system cannot function efficiently without a satisfactory method of identifying the driver. As an alternative to prosecution, a conditional offer fixed penalty notice system may be used. In countries that have adopted red light enforcement cameras at road junctions with historically bad accident records, satisfactory fatal and serious accident reduction figures have been obtained. In one particular case, a before and after survey showed a reduction of red light running of 57 percent and a similar reduction in injury accidents.

Although such camera equipment has been successful in industrialized countries, its relevance to the needs of most developing countries at this stage is debatable as it is expensive, requires a capability to maintain sophisticated equipment, requires an ability to trace vehicle owners, and an efficient judicial processing system. Apart from a few major cities, these conditions do not exist in most Asian and Pacific countries. Consequently, countries should think carefully before investing in such equipment.

c) *Blood alcohol screening devices*

Where a drinking and driving problem and consequent accident problem exists, it is ap-

propriate to consider publicity as the primary means of deterrence. However, without enforcement, such measures have limited effects. In developed countries drinking and driving has been a problem for many years. Deaths and injuries caused by drinking and driving can be significantly reduced and therefore are suitable targets for focused traffic police enforcement. Measurable results can be obtained, either by quantifying the number of police breath tests administered or other means, such as an analysis of alcohol-related accidents as a proportion of overall accident figures.

Considerable inroads have been made into the problem in developed countries through a combination of vivid publicity and high-profile enforcement.

Public attitudes have changed over the last 20 years to such an extent that drinking and driving is no longer seen as acceptable social behavior by the majority of the population. There, however, remains a residual group within the motoring public that has traditionally been unmoved by publicity. While many agencies may have a part to play in reducing drink-related accidents, traffic police must play a leading role through enforcement.

With regard to the Asian and Pacific region, the problem of drinking and driving varies, some countries having no particular problem while in others it is a matter for considerable concern.

Where a suitable legal framework is provided, and an alcohol-related driver problem is identified, conspicuous enforcement campaigns are recommended.

This has two effects. Most obvious is when the drinking driver receives personal attention of police with the associated legal consequences. Less obvious, but nevertheless valuable, is the police being seen by the motoring public to be enforcing the drink-drive laws. This discourages similar behavior by reinforcing the publicity and enforcement message.

Plate 5: Roadside alcohol testing site in Fiji.

Ideally, enforcement of alcohol restrictions should be simple and advice is provided on prescribed alcohol limits and offenses in Sector Guidelines 4.10.

Suitable handheld breath alcohol screening devices are accurate, highly portable, and easy to use at random roadside enforcement checks (see Plate 5).

4 STAGES OF DEVELOPMENT

Traffic policing evolves with motorization and the increase in road accidents. Four basic stages are summarized below, describing the gradual awareness of the specialized requirements of traffic policing and the need for optimal use of limited resources.

Stage 1: Traffic police staffing strength is often used to compensate for lack of training, equipment, and mobility. Traffic control is all that is expected from the majority of traffic police and they are often stationed at traffic signals to provide backup support. Overwhelmed and underresourced, traffic police earn little respect from the public.

Stage 2: Training begins to be improved (especially in the capital city where population pressures exacerbate traffic and safety concerns) and the number of mobile traffic police enforcement patrol teams is increased. A strategic plan may be developed and begin to help focus resources.

Stage 3: Increased awareness of the mismatch between needs and capabilities leads to an overhaul of the national traffic police training program. Overseas technical assistance is often required for guidance. With specialized training introduced, career tenure is allowed and junior police officers are empowered under trial programs of training and auditing. The strategic plan starts to be monitored and progress is regularly assessed. Enforcement campaigns are based on accident factors and the effectiveness of such campaigns is evaluated rather than assumed.

Stage 4: Traffic policing tasks are divided between human resources and automation. There is minimal duplication of effort with police rarely supplementing signals.

5 BENEFITS AND EFFECTS

Effective traffic policing should reduce the number and severity of road accidents as hazardous locations and high-risk actions will be

targeted. Traffic conflicts should also be reduced, which would not only facilitate orderly traffic flows and optimize road space use but also reduce the uncertainty and perceived risk of traffic movements at dangerous locations. The traffic police will also begin to report road accidents accurately and comprehensively so as to allow analysis and engineering investigations to occur in addition to legal prosecution.

6 EXAMPLES OF GOOD PRACTICE

Hong Kong, China and Singapore stand out as centers of excellence in the region. Both are well-equipped and have a defined management structure that is sympathetic to the role undertaken. While there may be some subtle differences in style or structure, and this is to be expected, broadly the deployment and management are as outlined earlier. Elsewhere, Australia and the UK, among others, have well-developed red light camera systems. These forces, which are using the most up-to-date technology in red light and speed cameras, also have sophisticated training schemes appropriate to the needs of operational traffic police officers.

Training courses specifically for traffic police officers from developing countries are available in more motorized countries. The National Police Agency in Japan has provided training in traffic control technologies for traffic police from many Asian countries, including People's Republic of China, Indonesia, Singapore, and Thailand.

The No. 6 (2) Region Police Driving School in Wiltshire, UK, has trained officers from more than 35 countries and since 1987 has offered an 11-week Overseas Traffic Officers Course. Longer and specialized courses have also been offered as well as in-country training. In 1989, a six-month training program was organized for five senior officers from the Indonesia National Traffic Police that focused on developing instructional skills in all aspects of traffic policing. An inspector was seconded to the National Traffic Police Training Centre for further assistance. Engineers from Indonesia's Ministry of Transport have also been trained in plating, testing, and weighing systems of heavy good vehicles and senior inspectors of the former Royal Hong Kong Police have attended an Instructors' course in VASCAR/Autovision.

Northwestern Traffic Police Institute, United States (US), offers national and correspondence courses in Accident Investigation, Traffic Law and Law Enforcement. Its Accident Investigation Manual[4] was first published in 1940 and is now in its eighth edition. Monash University in Melbourne, Australia, has a Department of Police Studies and offers courses of various types on traffic policing topics.

Each of these training establishments has slightly different areas of emphasis, so a selection of the relevant parts of several of these courses may be of best use to interested traffic police forces. In order to provide access to some of the training materials used in these courses, the following section includes information not only on references and key documents, but also contact addresses for some of the more important training establishments that specialize in traffic policing. Note that items 4 and 5 are available from Reference 2, and items 6, 7, and 8 are available from Reference 1.

7 REFERENCES AND KEY DOCUMENTS

1. No. 6 (SW) Region Police Driving School, Wiltshire Police Headquarters, London Road, Devizes, Wiltshire SN10 2DN, UK. Fax: (44 1380) 734 196.
2. Northwestern Traffic Institute, P.O. Box 1409, Evanston, Illinois 60204, US.
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Road Safety Guidelines for the Asian and Pacific Region

The guidelines cover 14 individual sectors affecting road safety, with four introductory chapters and four appendices. Information is presented in a series of freestanding documents that can be extracted for distribution and discussion.

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4.3: Road Safety Funding and the Role of the Insurance Industry
4.4: Safe Planning and Design of Roads
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