Preface

Introduction

The *Traffic control devices manual* (TCD manual) will provide guidance on industry good practice, including, where necessary, practice mandated by law. The planned structure of the TCD manual comprises 10 parts and is shown in table A.

Each part will be developed under the guidance of a working group of practitioners experienced in, and having specific knowledge about, the subject. The practitioners will also be representative of the intended users of the documents. Interested practitioners and affected organisations will be given the opportunity to comment on drafts and have their input incorporated appropriately in the final document.

The TCD manual will be published electronically only and will be available on the NZ Transport Agency’s website.

Relationships with other documents

The TCD Manual will support and reference:

- New Zealand legislation and, in particular, the Land Transport Act 1998 and rules made pursuant to that act, including the Land Transport (Road User) Rule, the Land Transport Rule: Traffic Control Devices and the Land Transport Rule: Setting of Speed Limits
- general polices contained in Austroads Guides (in particular, the Guides to Traffic Management, Traffic Design and Road Safety) by providing detailed guidance to meet specific requirements of New Zealand law and practices
- New Zealand and, as appropriate, Australian standards
- codes of practice, guidelines and published standards of various authorities.

Each part will attempt to provide a broad coverage of the subject but avoid duplicating major elements of referenced documents, preferring to direct readers to the source.

The TCD manual will, on completion, replace the NZ Transport Agency publication *Manual of traffic signs and markings* (MOTSAM).

Part 7 Parking control

Part 7 (formerly Part 13) was developed with guidance from a working group representing local government (3 members), New Zealand Parking Association (3), Ministry of Transport (1), Automobile Association of New Zealand (1) and NZ Transport Agency (2). In preparing the First edition they were assisted by the contracted authors (Tim Selby and Cherie Urlich of Opus International Consultants).
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*Note: The table structure is not translatable into a pure text representation.*
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1 Introduction

1.1 Purpose

What’s in this document

Part 7 Parking control is part of a suite of guidelines within the Traffic control devices manual (TCD Manual) prepared by the NZ Transport Agency (NZTA or the Agency). The document is intended to provide guidance on the use of traffic control devices to transport and parking practitioners, management and enforcement staff. Its aim is to provide the industry with best practice guidance on the use of traffic control devices related to stopping, standing and parking. In particular, it builds upon the specifications for approved signs, markings and other traffic control devices approved or mandated for use in New Zealand as set down in the Land Transport Rule: Traffic Control Devices 2004 (TCD Rule) and described further in Traffic control devices specifications (TCD specifications).

Terminology – law or good practice

The following terminology is used in the document to describe whether an aspect or statement is a requirement under law or good practice

• must - indicates something that is mandated or required by law
• should – indicates a recommendation
• may – indicates something that is optional and may be considered for use.

1.2 Stopping, standing and parking

Within the TCD Rule and the Land Transport (Road User) Rule 2004 (Road User Rule), ‘parking’ is defined as meaning:

• in relation to any portion of a road where parking is for the time being governed by the installation of parking machines placed under a bylaw of a local authority, the stopping or standing of a vehicle on that portion of the road for any period exceeding five minutes; and
• in relation to any other portion of a road, the stopping (whether attended or unattended) or standing of a vehicle (other than a vehicle picking up or setting down passengers in a loading zone or reserved parking area, and entitled to do so) on that portion of the road.

The TCD Rule also goes on to define ‘standing’ as stopping:

• for the purpose of picking up or setting down passengers, or, in the case of a taxi stand, for the purposes of waiting for hire; and
• while a vehicle remains attended by the driver at all times.
1.3 Scope

The document seeks to incorporate links to a number of appropriate polices, standards and guidelines and forms a logical link to New Zealand practices for the Austroads Guide to Traffic Management series.

This document sets out the legal framework under which parking, stopping and standing is permitted, as well as setting out the responsibilities of those providing parking spaces. It also provides guidance on design considerations and specific standards and design elements that need to be taken into account with respect to public and private car parking provision, both on- and off-street. Furthermore, the document makes comment on the above with respect to different types of parking provision (linear and zone parking), the types of control (time and charge) and the associated traffic control devices and parking furniture needed to provide appropriate and adequate guidance to road users on the prevailing parking restrictions.

It should be read in conjunction with:

- Legislative requirements, particularly the TCD Rule and the Road User Rule
- Guidelines, such as the Austroads Guide to traffic management (in particular part 11 Parking)
- Other parts of the TCD manual as appropriate.

1.4 Value for money

The Land Transport Management Act (LTMA) sets a framework for planning, programming and funding land transport activities. It encourages integrated long-term planning and allows funding flexibility to achieve an affordable, integrated, safe, responsive and sustainable land transport system.

The LTMA requires the NZTA and approved organisations which receive payments from the Land Transport Fund to use this revenue in a manner that seeks value for money. Value for money can be defined in a variety of ways but in general it means selecting the right things to do, implementing them in the right way, at the right time and for the right price.

The NZTA Planning, programming and funding manual which describes processes for funding from the National Land Transport Fund (NLTF) is aimed at strategic and tactical levels. The value for money concept which drives those processes should be applied to every element of the road network, including the use of the traffic control devices described in the TCD Manual and, in particular, this part.

The parking strategies adopted by an RCA should support broader strategies. Parking is a relatively expensive commodity incorporated into the costs of buildings and roadway facilities and is added as a hidden surcharge to the price of effectively any good or service. Good parking policy should establish what constitutes an appropriate supply of parking and then manage the demands for that parking to support agreed objectives including accessibility, amenity, safety, network effectiveness and efficiency.

At a more basic level, trial application of the parking sign regime introduced in the TCD Rule 2010 amendment has demonstrated significant costs savings due to reductions in the numbers of signs and extent of marking required to define parking restrictions.
1.5 Engineering judgement

This manual refers to rules and provides standards and guidance on the use of traffic signs and markings. However, practitioners should always apply sound engineering judgement to ensure that the use and installation of a traffic sign or marking will provide value for money and in particular that it is necessary and will be effective long-term at a particular site.
2 Responsibilities

Parking provision, for either public or private use, is the responsibility of road controlling authorities (RCAs). Within the TCD Rule, in relation to a road, an RCA:

(a) means the authority, body or person having control of the road; and

(b) includes a person acting under and within the terms of a delegation or authorisation given by the controlling authority.

These can be either:

- territorial authorities (TAs) and regional councils
- the NZTA and other Crown entities that manage and maintain roads (eg Department of Conservation)
- private landowners providing and managing car parks for public use, including supermarkets, hospitals, airports and universities
- other private landowners.

An RCA may provide off-street public parking spaces; for instance, in multi-storey car parks for general use subject to a charge or conditions, or private parking spaces for use by specific invitation only.

2.1 Public parking

Public parking is parking controlled by either the local road controlling authority or a private company, that which, subject to the road user meeting the conditions imposed by either organisation, the general public are invited or have a right to use.

2.1.1 Road controlling authorities (RCAs)

RCAs manage on-street parking spaces and may also own and operate off-street public parking facilities. Parking restrictions, prohibitions and fees are typically set by the RCA through bylaws. The bylaws are enforced by RCA-appointed parking wardens who may issue parking notices or impose other forms of penalty, such as the towing away of illegally parked vehicles.

Some off-street parking provided by an RCA may simply be subject to conditions of use (see section 2.1.2).


2.1.2 Private operators

Private operators (who may be considered RCAs with respect to the TCD Rule) may establish and provide parking spaces on land under their direct control for use by general members of the public. Typically, car parking provision is subject to conditions of use, eg parking charges levied on users of the parking space. Private operators (such as universities and supermarkets) cannot make bylaws but
are able to enforce their terms of use using their rights as the landowner/occupier. However, it is important the private operator provides clear notice of the terms under which the public may use or, as the case may be, not use the space, and use of signs and markings in the form contained in the TCD Rule would substantially meet this need.

Enforcement of the parking conditions is typically through private agencies that may clamp or tow non-complying vehicles. There should be a delegated authority between the landowner/occupier and towing firm to allow them to act in towing the vehicle. An agreement should be in place between the towing firm and the Police to provide information in an event of the car being reported stolen. In New Zealand, only the Ministry of Justice may clamp vehicles on a public road where there are unpaid court-imposed fines applying.

2.2 Private parking

Private parking is controlled by private organisations, whereby parking spaces are available to certain users by invitation only. Private parking is generally off-street, eg private non-residential parking associated with office blocks or retail outlets but may be on-street (eg on non-council managed ‘un-adopted’ roads) where the street is a private access to a number of dwellings. Access to and from private non-residential parking spaces may be controlled by various means, such as barriers at the entrance or exit, or can be restricted to users of the private property (eg parkers are required to shop at a specified retail outlet that owns the parking area).

As with private operators providing public parking, enforcement of the parking conditions is typically through private agencies that may clamp or tow non-compliant vehicles. Similar requirements and agreements between both the landowner/occupier and Police with the towing firm, as indicated previously, should be in place, and any situations should be appropriately signed.
3 Legal framework and implications

3.1 General principles and powers

The following document outlines the legal requirements of RCAs and other parties in New Zealand in relation to parking facilities, their enforcement and road user responsibility.

3.1.1 Statutes

**Land Transport Act 1998**

This Act is intended to:

- promote vehicle safety and safe road user behaviour
- provide a system of rules for governing road user behaviour, the licensing of drivers and technical aspects of land transport, and to recognise the reciprocal obligations of persons involved
- consolidate and amend various enactments relating to road safety and land transport
- enable New Zealand to implement international agreements relating to road safety and land transport.

Section 152 of the Act relates to traffic control devices, and describes the power of the Minister of Transport to make ordinary rules – in this case, the TCD Rule and Road User Rule, as described in section 3.1.2 below.

**Land Transport Management Act 2003**

This Act sets out the requirements and processes for local authorities (regional councils and TAs) and other approved organisations, and the state highway and education arms of the NZTA to obtain funding for transport service, maintenance and improvement activities, and for education activities. It also sets out requirements for funding of road enforcement activities by the New Zealand Police.

The Act requires the NZTA to satisfy itself that any activity or combination of activities that it approves for funding contributes to its objective of an affordable, integrated, safe, responsive and sustainable land transport system, that it contributes to the objectives of the Act and that alternatives and options have been considered; in short that the activity represents value for money. The NZTA must also give effect to the current Government policy statement on land transport funding.

These requirements form the basis of the processes and guidance contained in the NZTA’s Planning, programming and funding manual.
The Act was amended in 2008. This amendment, among other things, created the NZTA, formed by the merger of Transit New Zealand and Land Transport NZ.

**Transport Act 1962**

The Transport Act 1962 was the principal act for general road transport matters. Most of the provisions have been updated and incorporated into the Land Transport Act 1998; however, the Transport Act still contains some elements relating to parking, primarily bylaws and appointment of parking wardens.

**Local Government Act 1974 and 2002**

The Local Government Act (LGA) provides the general framework and powers under which New Zealand TAs operate, and is designed to provide a democratic and effective local government that recognises the diversity of New Zealand communities. The legislation promotes local accountability and defines a clear purpose for local government.

In relation to parking, the LGA sets out the TA responsibility and power to set any parking restrictions and providing parking places.

**Building Act 2004**

The erection of houses and other buildings is controlled by the Building Act 2004 and applies to the construction of new buildings as well as the alteration and demolition of existing buildings. In particular, it provides legal requirements for the number, design and access of disabled car parking spaces.

### 3.1.2 Land transport rules

**Land Transport Rule: Traffic Control Devices 2004 (TCD Rule)**

The TCD Rule describes the requirements for the design, construction, installation, operation and maintenance of traffic control devices. It sets out and details the responsibilities of RCAs in the provision of traffic control devices.

RCAs must follow the requirements as described in the TCD Rule. In particular, sub-clause 13.1 (1) states ‘a road controlling authority must comply with this rule when providing, installing, modifying or maintaining a traffic control device’.

**Land Transport Rule: Road User Rule 2004 (Road User Rule)**

The Road User Rule stipulates how traffic must legally operate on the road and applies to all road users. In particular, with respect to stopping and parking, the Road User Rule stipulates parking prohibitions in certain specific locations, such as near intersections, pedestrian crossings and bus stops. The signing and marking requirements associated with these locations are highlighted in section 3.3.
3.2 Regulation of parking

Parking control is determined by either the RCA or the private landowner. The application of parking control and its enforcement on roads vested in a TA are made under bylaw processes and are made by exercising powers in the Local Government Act 1974 and section 72(1)(k) of the Transport Act 1962.

NZTA has the power of a local authority under the Government Roading Act 2008 to control parking. However, under section 62 of the Government Roading Act, NZTA has the power to delegate that power to local authorities to manage and enforce parking on the state highway network. In such circumstances, NZTA typically retains the power to impose no stopping restrictions (including those imposed by the creation of special vehicle lanes and clearways) but allows the TA to set other parking restrictions and manage the enforcement of time limits and fee collection.

The RCA must install parking marking and appropriate signs described by the TCD Rule.

The existence of underlying legislation prohibiting parking in certain locations (for instance, within 6 m of an intersection or obstructing vehicle entrances and exits) as prescribed in the Road User Rule removes the need for such restrictions to be specifically identified within a local authority bylaw and they may not need to be specifically marked or signed. However, where appropriate, they can be reinforced and identified to road users through the provision of appropriate traffic control devices. In such circumstances, however, care is needed to ensure any offence notice issued during enforcement stipulates the correct description of the offence committed. Alternatively, for RCAs, it is recommended the restriction is implemented through the bylaw process to negate any confusion.

The control of parking at any other location deemed appropriate by the RCA/private property owner can be undertaken through the use of signs and markings.

The application of any restrictions on parking on public roads outside of the general limitations of the rules must be by way of RCA bylaw. Information relating to such parking restrictions should be accessible to the public and, if required, be able to be presented to a court to support any prosecution.

Private owners who invite the public to park on their property (eg parking buildings, supermarkets or hospitals) could be considered RCAs and have responsibility to manage the signing and marking of parking under the TCD Rule. Regardless, private owners have duties toward the public they invite onto their property and installing signs and markings that comply with the TCD Rule will more likely lead to public acceptance and compliance and reduce the likelihood of claims of inadequate, misleading or dangerous information. If a restriction imposed by a private owner is challenged it could be of value if the owner had some form of documentary evidence the restriction was reasonably imposed by an appropriately authorised person.

3.3 Implications of parking legislation

When stopping, standing or parking a vehicle, it must be done with due care and with reasonable consideration for other road users, regardless of whether the vehicle is attended or unattended.

Furthermore, under the Road User Rule, vehicles must not be parked on a roadway if it can be parked “on the road margin without damaging ornamental grass plots, shrubs, or flower beds laid out or planted on the margin”.

In certain circumstances, legislation requires that appropriate signs or markings be installed to denote parking restrictions or prohibitions and that these be applied in a uniform and consistent manner.
3.3.1 Parking signs and markings – general requirements

Parking signs or markings must be used when the RCA has made a bylaw or uses some other legal method to prohibit the stopping of vehicles at all times.

Where parking prohibitions exist through the Road User Rule (e.g. at fire hydrants, across driveways – see photo 3.1, close to corners, and on or near pedestrian crossings), the TCD Rule allows RCAs to install regulatory signs or markings to draw attention to the restriction (see also section 3.3 for more detail). The bylaw process however is recommended for the installation of such regulatory signs and markings and this must occur where the markings or signs extend the restriction beyond the minimum defined by legislation.

Parking signs or markings must be installed when the RCA has:

- prohibited or restricted the stopping of all or some types of vehicles for specified periods of time;
- reserved parking to a class or classes of vehicles;
- required vehicles to be parked in a particular manner.

The TCD Rule specifies when signs or markings must be used and also defines their form and colour.

From 1 April 2011 any new parking sign must be in one of the forms shown in figure 3.1. It is important to note that the Land Transport Rule: Traffic Control Devices Amendment 2010 provided a 'savings clause' for existing signs. This amendment means any traffic control device (including parking signs) that was legal at the time of its installation may continue to be used for the purpose for which it was intended unless an expiry date or replacement is specified or it no longer remains safe, it is inadequate for its intended use or it requires repair. This part of the TCD manual has been amended to reflect the requirements for new signs.

![Figure 3.1 Parking sign format](image)

The symbols, words or other information that may be included in each component of the sign and which of the components are mandatory or optional is contained in Schedule 1 of the TCD Rule.

More than one but no more than four parking signs, or a special vehicle lane sign and no more than three parking signs may be installed on the same pole or in the same location (e.g. on a building wall or fence). The combination of signs at this one location is termed a ‘sign panel’ in the TCD Rule. Each sign making up the sign panel may be on a separate sign plate or combined with one or more of the other signs on a plate.
The order of signs within a sign panel must comply with the following:

(a) No sign incorporating a ‘P’ symbol must appear above a sign containing a ‘P$’ symbol;

(b) No sign incorporating a ‘P’ or a ‘P$’ must appear above a sign incorporating a ‘no parking’ symbol;

(c) No sign incorporating a ‘no parking’ symbol must appear above a sign incorporating a ‘no stopping’ symbol

(d) Any sign incorporating the words ‘Other times’ must appear at the bottom of the panel;

(e) A special vehicle lane sign must appear above all parking signs on the panel.

In general and where practical, reserved spaces and loading zones (including bus stops and taxi ranks) should be marked. If they are marked, one sign indicating the nature of the restriction is sufficient unless the length of the restriction exceeds 100m.

More detail on signs and markings is provided in the following sections.

3.3.2 Parking restrictions imposed by the Road User Rule

As indicated in section 3.2, there are a number of locations and situations where the stopping, standing or parking of a vehicle is contrary to the Road User Rule. Such locations need not be specifically signed or marked unless the RCA considers it appropriate to do so or has determined parking may occur and has signed or marked this exception.

Bends, crests and dips

There are instances where parking on high-speed, high-volume roads or at unexpected locations will create a disruption to through traffic. Within the Road User Rule, drivers or people in charge of vehicles must not:

Stop, stand, or park the vehicle on any part of a roadway so close to any corner, bend, rise, dip, traffic island or intersection as to obstruct or be likely to obstruct other traffic or any view of the roadway to the driver of a vehicle approaching that corner, bend, rise, dip, traffic island, or intersection unless the stopping, standing or parking is authorised by signs or markings maintained by the RCA (subclause 6.3 (1)).

While there is no specific requirement for an RCA to mark such locations, the TCD Rule provides for an RCA to install No Stopping signs or markings where demand for parking has created these types of hazards (see photo 3.2).

Intersections

Parking within 6 m of an intersection can reduce visibility for other road users or restrict movement of vehicles and is not permitted under subclause 6.3(2) of the Road User Rule. Again, while there is no legal requirement to provide road markings at such locations, RCAs may provide them where appropriate to help reinforce the need for vehicles to be kept clear of such locations.
An intersection is defined in relation to two or more intersecting or meeting roadways as that area contained within the prolongation or connection of the lateral boundary lines of each roadway. In relation to the rules on no stopping within 6m this definition can have some often overlooked impacts.

On the roadside opposite the stem of a ‘T’ junction the rule effectively imposes a length of no stopping shown in figure 3.2. This provision does provide for some space for vehicles to pass another stopped waiting to turn right into the side road but as traffic volumes increase no stopping restrictions would be commonly required.

Where the relative alignment of the intersecting roadways create acute and obtuse angled intersecting roadway boundary lines the 6m of no stopping could be unclear to drivers. An example is shown in figure 3.3. In these circumstances, where parking is common or any parking creates a risk to road users it is recommended RCAs mark out appropriate lengths of no stopping distances. It should also be noted that such distances can be within the 6m distance defined by the roadway boundaries if this is safe and supported by bylaw.

**Driveways**

Drivers must not stop, stand or park their vehicles so that they obstruct driveways. Obstruction is defined as a vehicle being parked ‘alongside any part of a kerb crossing provided for a driveway or within 1 m of the prolongation of the side of the driveway’ (Road User Rule, clause 6.9). The TCD Rule does not require RCAs to mark or sign such locations and, in general, it is recommended they are not marked. However, an RCA may consider installing markings where there is:

- high parking demand and the extent of no stopping imposed by the driveway is not clear (poor definition of kerb crossover or unusual alignment of the driveway; or
- sight visibility is an issue.

If more than 1m of no stopping restriction is desirable and is marked (for example vehicle movements into or out of the driveway are difficult) the RCA must impose the additional distance by bylaw.

**Pedestrian crossing facilities**

A number of different types of pedestrian facilities are described in the TCD Rule:

- Marked pedestrian crossing (‘zebra crossing’): A pedestrian crossing or ‘zebra crossing’ must be marked in accordance with the TCD Rule, Schedule 2 (M1-1). The rule does not require that parking restrictions be applied to the approaches to the pedestrian crossing; however, the Road User Rule states drivers must not park (or stop) on, or within 6 m of the driver’s approach to, the marked pedestrian crossing.

    A pedestrian crossing must be placed so it is visible to a driver approaching from any direction (clause 8.2(7) of the TCD Rule) and this may require the imposition of no stopping restrictions greater than 6 m which must be imposed by bylaw.

    If the RCA has installed a kerb build out at the crossing it may be practical and safe to allow drivers to park within 6 m. The RCA must authorise this by means of signs or markings (clause 6.5(3)(b) of the Road User Rule).
- Other pedestrian facilities (eg refuges/traffic islands): under clause 6.7 of the Road User Rule, a driver or person in charge of a vehicle must not stop, stand or park the vehicle on a traffic island or flush median.

Pedestrians should have unobstructed access to refuges and good visibility at the kerb. While a kerb build out at the site might be constructed and the RCA reasonably anticipate drivers will not stop or park in this area (see ‘bends, crests and dips’ above) it may be necessary to install a no stopping restriction.

A kerb crossover that is not related to a driveway does not impose a no stopping restriction. Where such crossovers are regularly used by people on mobility devices the RCA may consider marking no stopping lines.

- School crossing points ('kea crossings'): A school crossing point must be marked in accordance with the TCD Rule, Schedule 2 (M1-3), which sets out a number of parking restrictions around the crossing location (see figure 3.4). Although the TCD Rule specifies minimum lengths of no stopping restrictions these must be imposed by RCA bylaw and, of course, may be extended beyond the minima.

**Figure 3.4 Parking restrictions around kea crossings**

Note: The length of the parking restrictions on the approach sides to the crossing may reduced to a minimum of 6m where kerb build-outs of at least 1.8m wide or where inset parking has been provided to ensure adequate visibility. On the departure side, the length of the parking restrictions must be a minimum of 6m.

**Bus stops**

Road users may not park, stand or stop on or within 6 m of a bus stop sign (Road User Rule, clause 6.8). Bus stops must be marked out where the space reserved for the bus extends for more than 6 m on either side of a single bus stop sign. Where bus stops are marked out, they should be marked in accordance with the TCD Rule Schedule 2. The standard layouts and traffic controls associated with bus stops are included in section 6.

**Special vehicle lanes**

Where part of a road is defined as a ‘special vehicle lane’ (such as a bus lane or cycle lane) for 24 hours, seven days a week, and is suitably marked or signed in accordance with the TCD Rule, no additional signing or marking to restrict or prohibit parking is legally required. In such cases, the driver or person in charge of a vehicle must not stop, stand or park the vehicle in a special vehicle lane unless the vehicle belongs to the permitted class of vehicle for which the lane is reserved and the stopping or standing of the vehicle is permitted by signs or markings (eg a bus stop within a bus lane).
Most cycle lanes operate 24 hours, seven days a week and are therefore not required to have cycle lane signs nor are they legally required to have no stopping lines marked. However, several RCAs have marked no stopping lines and this is permitted. Marking of cycle symbols at more frequent intervals may also assist remind drivers of their obligations.

For time-restricted special vehicle lanes, appropriate signs and markings are required to denote the parking restrictions in force outside of the hours of the operation of the special vehicle lane.

**Fire hydrants**

A driver or person in charge of a vehicle must not stop, stand or park the vehicle within 0.5 m of a fire hydrant (or, if the fire hydrant is below the surface of the road, within 0.5 m of the centre of the cover of the hydrant). However, a person is able to park within this location if someone who is capable of moving the vehicle remains with the vehicle, which can therefore be moved if necessary.

If a fire hydrant is outside the roadway, vehicles must not stop, stand or park between the nearer edge of the roadway and any marking on the roadway indicating the presence of the fire hydrant providing the hydrant is located within 6 m of the centre of that marking.

Although not specifically required to be marked, an RCA may mark the fire hydrant to help ensure access is maintained (see photo 3.3).

The markings and other means of indicating the location of fire hydrants should be in accord with SNZ PAS 4509:2008 New Zealand firefighting water supplies code of practice.

**At or near level crossings**

Although not required to be marked and signed, vehicles must not park on a level crossing or near a level crossing so as to obscure the view that other road users may have of the crossing or a rail vehicle approaching the crossing.

Recommended practice in urban areas is to mark at least 20 m of No Stopping restriction, which can be extended to ensure signs and traffic control devices are visible from a safe stopping distance. In rural areas, No Stopping lines may also be marked on the approach to level crossings when the RCA considers parked vehicles may restrict visibility of traffic control devices from a safe stopping distance.

### 3.3.3 Road user obligations toward parking signs and markings

The Road User Rule requires a driver or a person in charge of the vehicle to obey certain parking conditions if appropriately signed or marked in accordance with the TCD Rule. Some of these are described below.

**Parking at an angle**

Where an RCA has indicated parking at an angle to the direction of the roadway by way of parallel lines to indicate the permitted angle (see section 6.2), a driver must not stand or park a vehicle (other than a cycle) other than in accordance with the angle indicated. Goods vehicles that exceed 6 m in
length fitted with a flat deck or tray must not be stopped or parked at an angle to the direction of the road during hours of darkness unless permitted by signs or markings. The direction of entry into angle parking is discussed at 5.3.2.

**Parking on footpaths/cycle paths/shared paths**

Vehicles must not be stopped or parked on a footpath, cycle path or shared path with the exception of cycles and mobility devices. Cycles may be parked if permitted by signs or markings, or if cycle parking facilities are installed but a general exception for cycles and mobility devices exists provided when parked they do not unreasonably obstruct any other user of the footpath.

On narrow roads some RCAs have provided for parking on that area of the road previously set aside as footpath. A bylaw which permitted parking on a footpath would be ultra vires and the RCA is first required to define that area of the road previously used as a footpath as a parking area. To avoid any confusion regarding the status of the parking area (ie footpath or roadway) a symbol - one of those shown in Figure 3.5 - rather than words is recommended on any sign indicating where motorists may park.

**No parking**

The no parking symbol, shown in figure 3.6, means that drivers may not stop, stand or park at any time (unless a lesser time is shown on the sign) except for drivers of the class or classes of vehicles indicated on the sign below the symbol. Such excepted drivers may not stop, stand or park other than for the purpose of loading passengers or goods and providing the driver remains in attendance of the vehicle. Such restrictions include bus and coach stops, taxi and shuttle stands.

**Loading zones**

A loading zone is an area that has been designated by an RCA solely for the purpose of loading or unloading goods or passengers. The RCA must install appropriate signs and markings in accordance with the TCD Rule (see section 6).

**Reserved parking**

Reserved parking is an area of roadway that has been reserved for parking by a specified class or classes of vehicles, activity or by class of road user. This relates to particular types of vehicles such as buses, taxis, goods vehicles and vehicles used by the disabled.

Such areas need to be reserved by the RCA through bylaw and must be signed by one or more appropriate parking signs adjoining the area (at any place or places that give a driver reasonable notice of the presence of the area) (see photo 3.4). The extent of the reserved area must (unless impracticable) also be marked by yellow lines an issue discussed further in section 6.
3.4 Enforcement

With any type of parking regulation, enforcement must be undertaken to effectively manage the parking system. Without ongoing enforcement, road users will become complacent and the measures put in place to manage congestion and parking issues will not be effective.

3.4.1 Legislation and bylaws

Councils have the right to set bylaws under the Transport Act 1962 or Local Government Act 1974 and 2002. A council may appoint parking wardens under section 7 of the Transport Act 1962 and their powers to enforce are given by section 72(1) (k). General parking noncompliance and other restrictions (such as clearways) can also be enforced by the New Zealand Police.

When road users do not comply with the bylaw requirements, parking wardens issue stationary vehicle infringement notices (imposing standard parking fines) and may have the vehicle towed away. In some cases, offences or non-payment of the fine can result in court hearings.

Enforcement of bylaws should lead to better overall compliance of the parking and traffic system. There is a need for appropriate levels of enforcement to ensure fair and effective turnover of limited parking spaces and safe and efficient movement of traffic.

NZTA typically delegates the enforcement of parking restrictions on state highways in urban areas to the TA. Private landowners can transfer control of their parking spaces to the TA but, because of current legal processes, they generally prefer to manage their property using rights as landowner or occupier.

3.4.2 Types of enforcement

There are three main methods for the enforcement of parking controls:

- Stationary vehicle infringement notices (tickets) – the most common form of penalty involves authorised parking wardens issuing tickets to those vehicles that have not complied with the parking controls.

- Wheel clamping – involves attaching a clamp to a vehicle’s wheel to stop the vehicle being driven away and the vehicle owner has to pay to have the clamp removed. This can be used by both public (off-road only) and private landowners to aid enforcement of regulations. In New Zealand, only the Ministry of Justice may clamp vehicles on a public road where there are unpaid court-imposed fines applying.

- Tow-away – involves removing a vehicle from an illegally parked area and can be used by both public and private landowners.

These types of measures are further outlined in the Austroads Guide to traffic management, Part 11: Parking.

Private landowners should advise motorists of the type of enforcement undertaken in addition to the conditions of use where public parking is provided.
3.5 Exceptions to rules

3.5.1 Emergency vehicles

Emergency vehicles are used to attend emergencies and are operated by enforcement officers, the ambulance service, the fire service, civil defence emergency workers or defence force emergency vehicle drivers. Emergency service vehicles have a defence for not complying with parking restrictions, where:

- it is reasonable that the restriction should not apply to the emergency vehicle
- the driver is taking reasonable care in doing so.

Under clause 1.8(1) of the Road User Rule, if it can be demonstrated that there is a ‘life and death’ situation, an emergency vehicle is permitted to park anywhere provided their emergency beacon is displayed.

Where an area is regularly used by emergency vehicles but often not because of an emergency situation (eg an ambulance outside a medical centre, police outside a station or Court House) RCAs should consider providing reserved spaces rather than requiring the emergency service operator to prove the use of a space was consistent with the exceptions provided them in the Road User Rule.

3.5.2 ‘Public work’ vehicles

A driver has a defence for not complying with a parking restriction if:

- they can demonstrate the vehicle was engaged in a public work on the road
- the vehicle was being used with due consideration for other road users
- the parking was reasonably necessary for the purposes of the work
- the driver took all reasonable care.

In many cases the defence would be assisted by the driver demonstrating he or she was parking in accordance with a traffic management plan approved by the RCA.

3.5.3 Enforcement officers and parking wardens

A driver is not in breach of parking restrictions if:

- they can demonstrate the act was in compliance with the directions of an enforcement officer or parking warden;
- in the case of an enforcement officer or parking warden, the act was necessary in the execution of their duty.
4 Design considerations

4.1 Parking policies and strategies

The Government Policy Statement on Land Transport Funding (GPS) was issued in May 2009. Developing a land transport system that will achieve the short to medium-term impacts set out in the GPS requires planning and evaluation processes that take account of the following factors:

- the government’s priority to support national economic growth and productivity, which includes the national roading priorities set out in the list of Roads of National Significance
- considering networks from a national perspective
- achieving value for money
- encouraging integrated planning
- making best use of existing networks and infrastructure
- implementing and fostering a co-ordinated approach
- considering the impact of volatile fuel prices.

The introduction and implementation of suitable parking policies and strategies by local authorities can have an impact on achieving the impacts set out in the GPS, given that parking management significantly influences travel behaviour. Parking can be considered a key component in both transport and land use planning, as managing the availability and cost of available parking can help reduce the number of car trips to a particular location.

Parking policies should not be considered in isolation, but should support and take into account wider transport, economic development, urban design, environmental, and social and recreational strategies that may exist at a local and regional level. It is particularly important to consider parking standards within a regional context, given competing regional centres. For instance, the provision of free or unlimited parking at one retail centre may attract motorists away from another, closer shopping centre that has parking restrictions. Such an uncoordinated approach may therefore generate more and longer trips by car overall. Accordingly, parking provision should be viewed as an integral part of the transport issues associated with land use development.

The development of robust local and regional policies related to parking allows specific locations and areas to have targeted strategies in place depending upon the parking management regime required, eg residents’ parking or zone parking within a central business district (CBD).

In developing and implementing parking policies and strategies, a number of issues (as shown below) should be considered.
4.1.1 Functions and hierarchy of the road

Each road within a district should have a road hierarchy classification – this is normally outlined in the district plan of each TA. The hierarchies are there to ensure that all roads are consistent with their classification to achieve a safe and efficient transport network. It is important that parking requirements, restrictions and prohibitions relate to the intended function of the road (see table 4.1).

The function of each particular road type needs to be examined when determining the level of parking and, in cases where there are high volumes and speeds, the ability of the road to carry traffic efficiently and safely is reliant upon external factors such as parking and access control. For example, where there are arterial sections of road where peak volume are high, there may be a need to introduce clearway parking during specific times of the day to reduce roadside ‘friction’ or provide an extra lane for through traffic.

**Table 4.1 Movement and parking functions by road class**

<table>
<thead>
<tr>
<th>Road type</th>
<th>Movement function</th>
<th>Parking function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorway</td>
<td>Principal routes for the movement of goods and people between regions</td>
<td>No parking allowed</td>
</tr>
<tr>
<td>Arterial</td>
<td>Primary network that connects regions and cities/towns, as well as being the main roads through cities/towns, often forming long continuous routes and carrying the bulk of urban travel</td>
<td>Limited. Any parking provided should provide sufficient room for vehicles to manoeuvre out of spaces without disrupting through traffic. Opportunity exists to provide time-restrictive operations during peak times (eg clearways or special vehicle lanes)</td>
</tr>
<tr>
<td>Collector</td>
<td>Provides a connection between the arterial and local roads</td>
<td>Provided, but may have differing types of restrictions applied</td>
</tr>
<tr>
<td>Local</td>
<td>Provides access to adjacent property</td>
<td>Provided. Restrictions may be applied where demand is high</td>
</tr>
</tbody>
</table>

In conjunction with the roading function, parking policies and strategies need to be linked to the overall land-use type in which the road is located.

4.1.2 Adjacent land use and development

Land use is a major factor when developing parking policies and strategies (as well as when determining supply and demand for specific parking facilities). Land use can be split up into general types of activities (eg as set out in a TA’s district plans), which can help guide the type of parking controls to be implemented, for instance:

- In retail and commercial areas, parking controls such as the provision of short-term parking for clients and customers will support such activities. The most sought-after spaces should be made available to the greatest number of people through the use of time limits.
- In residential areas, particularly near commercial areas, parking controls such as resident parking permit schemes will support residents’ parking needs. Naturally, such controls need to balance the needs of non-residents visiting the area by way of time-limited parking.
For each type of road through and within different land uses, permitted stopping and parking activity types (e.g., bus stops, taxi stands, loading zones, disabled parking, short-/long-stay parking, residents’ parking) can be identified and potentially prioritised.

Local authorities have a responsibility in determining the number of off-street parking spaces to be provided, through controls set down in their district plan. These controls typically provide for maximum or minimum numbers of parking spaces for specific types of development and relate to the policies and strategies adopted by that local authority. Larger developments that typically require an integrated transportation assessment to support the resource consent application should identify the amount and type of parking to be provided with respect to the district plan.

### 4.1.3 Traffic characteristics

The type of vehicles or classes of users and their relative priority in terms of time and space allocation will need to be identified when developing a parking strategy and designing layouts for an area. Vehicle sizes and dimensions are included in section 4.6.

The types of vehicles include cars, taxis, buses, heavy vehicles, motorcycles, cycles and, in some areas, mobility devices, while classes of users include disabled, commercial and local residents. The demand for parking is largely influenced by the adjacent land use, such as retail areas in the middle of a CBD, schools, residential suburbs or industrial zones.

### 4.2 Urban design considerations

When developing and designing both on- and off-road parking facilities, certain environmental aspects should be considered to ensure they blend into the surrounding facilities and provide a certain level of ‘attractiveness’ to road users. The following should be considered when developing parking areas:

- separating surface parking places into smaller areas
- use of different colours and textured materials appropriately
- use of landscaping to provide appropriate visual impact to parking areas
- application of crime prevention through environmental design principles.

In addition to the above, the designer needs to consider how well the design of the car park area, building, etc. fits into the overall environment. This would include aspects of types of access, pedestrian use (including users of mobility devices), safety, landscape and site context. Further information is provided within the *New Zealand urban design protocol*, the *National guidelines for crime prevention through environmental design in New Zealand* and Austroads *Guide to traffic management: Part 11: Parking*.

### 4.3 Characteristics of users

When developing parking areas, the type and characteristics of potential users need to be considered in order that their requirements are taken into account during the design. Potential users include:

- **Casual users**: These are usually short-term visitors to an area who would not be familiar with the parking systems in place and may, therefore, warrant larger parking spaces being made available.
- **Regular users**: Those who are familiar with the parking system who may, therefore be comfortable with using smaller car parking spaces.
- **People with mobility impairment**: Types of mobility-impaired users and their requirements should be identified within any parking strategy in order to provide sufficient facilities of an appropriate standard. Parking for people who are mobility impaired is set down in the Building Act 2004, which generally refers to a percentage of spaces being made available.

NZS 4121: 2001 *Design for access and mobility – buildings and associated facilities* states ‘it is required under Section 118 (previously section 47A) of the Building Act to provide car parks for disabled road users’, and car parks provided for this purpose must be on an accessible route and as close as practicable to the site. The standard also refers to the minimum design requirements, accessibility issues and the minimum number of parks required dependent on the land use.

Those road users entitled to use parking spaces reserved for disabled persons must display an approved disabled person’s parking permit (issued by CCS Disability Action Inc, Sommerville Centre for Special Needs Wanganui or approved by the territorial authority having control of the parking area). Note: The majority of TAs will accept current international mobility permits when enforcing the use of parking spaces reserved for disabled persons.

- **Other**: Off-road parking facilities (such as supermarkets, hospitals, universities) may provide space for users other than those listed above who require specific design requirements. For instance, ‘parent and child’ parking bays, reserved for parents travelling with children (often up to approximately eight years of age), may be provided and would probably need to be designed to accommodate push chairs and prams being taken out of, or put back into, a car.

### 4.4 Parking management

In addition to the quantity of parking provided, parking can be managed through a number of interventions such as time restrictions, pricing mechanisms and restricted usage. Fees and time limits are often used to ration and create turnover of spaces where there is a short supply of parking provision relative to demand.

#### 4.4.1 Time limits

As part of the sign requirements for regulation of parking facilities, there are common time restrictions applying to linear or zone parking. The permissible periods of parking are normally in multiples of ‘5 minutes’ and are applied in appropriate situations, generally determined by use.

Time limits help create a turnover of parking spaces, thus maximising opportunities for a greater number of motorists to park their vehicle in locations of high demand.

Short-stay parking facilities are needed for shoppers or visitors to an area who generally require a limited amount of parking time. Where demand exceeds supply for these types of users, alternative arrangements such as off-street facilities or fee-paying systems should be introduced to minimise conflict and congestion on the surrounding road network.

Long-stay parking facilities are appropriate for those drivers who generally park all day, such as commuters. Their demands must be taken into consideration when developing a strategy to ensure commuter parking does not occupy valuable parking areas required by those requiring short-term parking arrangements, such as shoppers and visitors.

Table 4.2 suggests a range of parking durations and appropriate uses. Further information is provided in the Austroads *Guide to traffic management, Part 11: Parking*. 
Where provisions are made for mobility parking, consideration should be given to whether the signed time restrictions for adjacent parking facilities are appropriate for the reserved mobility parking spaces. Mobility impaired may take longer to travel between the parking area and their destination. The TA may wish to review the time limits imposed on the mobility impaired or review enforcement requirements. For instance, commonly used techniques include applying a 30–60-minute parking extension as a concession.

Note that a 5-minute (‘P5’) parking restriction should not be used in mobility parking areas. While it is important to provide good accessibility for people with disabilities restricting the use of one or more spaces of a limited number within a high-turnover, short-term parking area to that group could lead to an excessive number of parking breaches. Adoption, in these areas, of suitable time tolerances for those displaying disabled parking permits should suffice in providing access and assist in retaining general public acceptance of mobility parking spaces in other locations.

**Table 4.2 Examples of parking durations and use**

<table>
<thead>
<tr>
<th>Duration</th>
<th>Use</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 mins</td>
<td>Used at locations where people are likely to be picked up and dropped off and vehicle is likely to be attended</td>
<td>Drop-off or pick-up zones for passenger or goods</td>
</tr>
<tr>
<td>5–10 mins</td>
<td>Used at locations where people are likely to be picked up and dropped off</td>
<td>Hotels, movie theatres, airports, schools</td>
</tr>
<tr>
<td>15 mins</td>
<td>Used at locations where people exit the car for short-duration visits</td>
<td>Single land use facilities, eg dairy, banks</td>
</tr>
<tr>
<td>30 mins</td>
<td>Locations with a high turnover of shoppers due to demand</td>
<td>Number of small shops or multi-use shops or larger centres where public off-street parking is available</td>
</tr>
<tr>
<td>1 hour</td>
<td>Where there is a high turnover of shoppers and major demand for parking</td>
<td>Major shopping centres, professional services (eg lawyers, medical centres, accountants)</td>
</tr>
<tr>
<td>2 hours</td>
<td>Major demand for parking</td>
<td>Professional services</td>
</tr>
<tr>
<td></td>
<td>Resident parking schemes may apply for long-term users</td>
<td>Shopping centres</td>
</tr>
<tr>
<td>4 hours</td>
<td>Used for those areas where all day parking is not desirable</td>
<td>Areas where shopping/professional services apply, universities or other tertiary education facilities</td>
</tr>
</tbody>
</table>

### 4.4.2 Fee-paying systems

As the demand for parking outweighs the supply, there may be a need to incorporate some fee-paying systems to help better manage the parking available within the network. Fees can be effective in ensuring that motorists stay no longer than they need to, which, as with time limits, creates turn-over of the parking space and provides an opportunity for another motorist to use the space.
There are several different types of fee-paying systems for parking, which can be paid for in different ways depending upon the parking machine and technology available (for instance, being able to insert a coin in a parking meter or pay by cellphone at a Pay and Display machine):

- parking meters
- coupon parking and parking permits (permits issued for specific time periods)
- ticket vending machines – Pay and Display.

The issues associated with using these types of systems are further outlined in section 9. Some of the benefits from introducing fee-paying systems are:

- higher turnover in parking spaces
- better enforcement due to time systems in place
- discouragement of all day parking
- increase of revenue.

### 4.4.3 Restricted usage

By restricting parking spaces to certain users, such as residents within a defined area, parking can be managed to best address the needs of those who may be affected by ‘stray’ parked vehicles. The restriction of parking to certain groups of people is typically tied in with time restrictions – so that restrictions are in place when area-wide demand would exceed supply, eg during the working day when commuters and shoppers may try to park in residential areas close to the CBD.

When developing residential parking schemes, a balance in parking provision must be sought with any local businesses in the area. An overall parking strategy needs to be developed to incorporate all these issues. See photo 4.1 for a typical sign used in a coupon parking area.

### 4.5 Parking provision

#### 4.5.1 Parking zones

Zone parking generally covers an area with a uniform set of specific parking restrictions. Fee-paying systems can be applied to this entire area. There may be situations where specific parking zones over a small area may be established within an overall larger CBD zone – ie where a self-contained area has parking restrictions that vary from the overarching zone parking controls. Where this occurs, the most appropriate signage must be displayed to correctly identify to the road user the system in place.

The extent of a parking zone is shown by the use of signs at all entry and exit points to the zone. Examples of layouts of signs for an area can be found in section 7. Further information on placement of signs associated with zone parking is contained in *AS 1742.11: Manual of uniform traffic control devices – part 11 parking controls*. 
4.5.2 Loading zones

Loading zones are generally created for those vehicles that require parking for a short term to pick up or drop off goods or passengers. The type of zone required (whether for goods, passengers or both) and the time limits will be determined by the RCA. Sites should be located at one end of parking bays free from any obstructions for ease of use when unloading or picking up. Further information is provided within the Austroads Guide to traffic management, Part 11: Parking. The signing and marking of loading zones is contained in section 6.

4.5.3 Rural parking

The majority of the information within this document relates to urban parking facilities, where there is typically more pressure on parking. However, rural parking issues do exist.

Types of rural parking include, but are not restricted to, rest areas, motorist service centres and truck stops. It is recommended that parking facilities in rural areas be located off-road where practicable. Advance direction signs should be provided so drivers have sufficient time to make a decision while travelling.

Details of the types of signs, including service signs, can be found in Part 2 of the TCD manual. Further information on rural parking can be found in Austroads Guide to traffic management, Part 11: Parking.

4.6 Design vehicles – base vehicle design

Traffic Note 48 (Land Transport NZ) ‘Light vehicle sizes and dimensions: street survey result and parking space requirements’ suggests AS/NZS 2890.1: 2004 Parking facilities Part 1: Off street car parking reflects New Zealand vehicle fleet data, and use of that standard is encouraged.

The base vehicle design is used to determine appropriate widths and lengths for vehicle spaces. Measurements are also taken from the Land Transport Rule: Vehicle Mass and Dimensions (2002) and should be taken into consideration along with the design elements outlined in section 5, and any requirements identified within TA district schemes, bylaws or other documentation.
5 Design elements

This section describes the specific standards and guidelines in relation to the elements of design of parking spaces.

5.1 Off-road parking

Off-road parking is where the parking facility does not directly interact with the through traffic flow along a road other than at the access point between the road and the car park.

This type of facility is required when demand for parking far outweighs the supply of on-road facilities and alternative parking areas are required. More information on off-road parking, including undercover and multi-storey parking facilities, can be found in AS/NZS 2890.1:2004 and AS 2890.2: 2002 Parking facilities: Part 2: Off-street commercial vehicle facilities. AS/NZS 2890.1 defines the classification of off-road parking by user type – such as all day parking, residential, long term, short term, high or low turnover and people with disabilities.

When providing off-road parking facilities for a substantial number of vehicles, a traffic impact assessment should be undertaken to assess:

- the impact of the generated parking traffic on traffic flows on the surrounding road network, including, as a minimum, the performance of the car park access
- the interaction of manoeuvring vehicles and pedestrians and the provision of suitable walking facilities within and to/from the car park
- any conflicting issues with adjacent side road and access ways, including site visibility
- the adequacy of queuing space within the car park to ensure vehicles do not block the approach roads.

5.2 On-road parking

On-road parking can be generally described as that which is located alongside the edge of the roadway, and where manoeuvring into and out of a parking space may interact with traffic flow.

Further information can be obtained from AS 2890.5: 1993 Parking facilities: Part 5: On-street parking and section 7 within Austroads Guide to traffic management, Part 11: Parking.

On-road parking is typically provided either parallel to or at an angle to the direction of traffic. Issues associated with each type of on-street parking are shown in table 5.1. It should be noted that ‘front-in’ angle parking (where a motorist drives their vehicle into the angled space and reverses out) or ‘rear-in’ angle parking (where the motorist passes the space and then reverses into the park and drives forward out of the space) may occur. The relative merits of each are discussed in detail in the Austroads Guide to traffic management, Part 11: Parking.
**Table 5.1** Positives and negatives of types of on-road parking

<table>
<thead>
<tr>
<th>Type of parking</th>
<th>Positives</th>
<th>Negatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel</td>
<td>If controlled, has the least disruption on flow of traffic</td>
<td>Cannot accommodate as many spaces as angle parking.</td>
</tr>
<tr>
<td></td>
<td>Has less crashes associated with manoeuvring out of parking spaces</td>
<td>Some cyclists may ride into an opening car door.</td>
</tr>
<tr>
<td></td>
<td>than angle parking</td>
<td></td>
</tr>
<tr>
<td>Angle (kerb)</td>
<td>Provides more spaces than parallel parking</td>
<td>Needs a wide roadway width to accommodate spaces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Depending on angle, it may be difficult for drivers parked to enter into traffic stream.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not suitable next to a cycle lane unless there is extra clearance for parking manoeuvres</td>
</tr>
<tr>
<td>Angle (centre of road – with a median separating traffic lanes)</td>
<td>Creates traffic calming effect</td>
<td>Should not be used on arterial roads, especially in conjunction with parking along the kerb</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pedestrians have to cross one carriageway when leaving and returning to the vehicle</td>
</tr>
</tbody>
</table>

### 5.3 Space requirements for design vehicles and users

There are a number of standard space requirements for specific vehicle types. The following information on design layouts for parallel and angle parking dimensions is taken from AS/NZS 2890.1:2004 or AS 2890.5:1993 unless noted otherwise. Design requirements are the basic minimum standard for New Zealand conditions and their use should be considered with respect to the 'Design considerations' in Section 4. For instance, when providing reserved spaces for use by the disabled or 'parent and child' vehicle parking spaces, parking bays will need to be larger than the minimum dimensions for 'standard vehicles'. Furthermore, when designing and providing parking bays, vehicle tracking (or turning) movements should be taken into account.
5.3.1 Parallel parking

Parallel parking adjacent to the kerbside in the direction of the traffic flow is a common form of on-street parking. The recommended minimum space requirements for different types of vehicle are shown in table 5.2.

Table 5.2 Preferred parking space lengths for parallel parking

<table>
<thead>
<tr>
<th>Vehicle type*</th>
<th>Space length (A) (m)</th>
<th>Space width (B) (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard vehicle (car/van)</td>
<td>5.4/6.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Taxis</td>
<td>5.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Disabled (on-street)</td>
<td>6.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Disabled (off-street)</td>
<td>6.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Bus</td>
<td>13.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Coach (using articulated vehicle)</td>
<td>19.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Truck (small rigid vehicle)</td>
<td>6.4</td>
<td>3.5</td>
</tr>
<tr>
<td>Truck (medium rigid vehicle)</td>
<td>8.8</td>
<td>3.5</td>
</tr>
<tr>
<td>Car towing trailer</td>
<td>12.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Truck (large rigid vehicle)</td>
<td>13.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Truck (articulated vehicle)</td>
<td>18–20</td>
<td>3.5</td>
</tr>
<tr>
<td>Bicycle</td>
<td>2.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>2.5</td>
<td>1.2</td>
</tr>
</tbody>
</table>

* The Land Transport Rule: Vehicle Dimensions and Mass 2002 limits standard vehicles with their loads to a maximum height of 4.25 m. Normal clearance provided for most parking facilities is 4.5 m. For other dimensions and clearances, also refer to section 5.3 in AS/NZS 2890.1: 2004.

1 AS 2890.5: 1993 has three different lengths depending on the location of the parking space. 5.4 m is the nominal space length and is used in standard layouts for on-road parking at end of bay and 6.0 m is used for middle parking bay. See AS 2890.5:1993 for further information. Spaces adjacent to walls or other obstructions can have their width increased by 300 mm on the side of the obstruction.

2 For taxi bays, use 5.4n + 1.0 where n = number of taxis along taxi stands (AS 2890.5: 1993).

3 Design requirements are taken from NZS 4121:2001. Any variations on standard parking dimensions such as rear-mounted hoists should be investigated further. Use standard vehicle length requirements to accommodate any variations in vehicle. The minimum length requirement in NZS 4121:2001 is at least 5 m; however, good practice is 6 m. Furthermore, under subparagraph 12.4(8)(a)(ii) of the TCD Rule, a reserved parking area such as that provided for disabled users cannot have the parallel marking more than 3 m from the kerb or roadway edge.
However, this is only for the width of the parking bay, and the turning circle is not provided for within the 3 m width; an additional 1.5 m should be provided for this.

4 For bus bay length, use \((n \times l)\) where \(n = \) number of buses using the bay simultaneously and \(l = \) length of vehicle. As a guide, use 12–13.5 m for single unit rigid buses and 18–20 m for articulated buses. Consider taper lengths of 15 m on approach and 15–30 m on departure. It is recommended the dimensions of the local vehicle fleet are confirmed prior to design.

5 Descriptions of vehicle type are taken from AS2890.2:2002 (and included in the definition). Dimensions are taken from table 4.1 for service bays.

### 5.3.2 Angle parking

Angle parking is used where there is sufficient roadway width. It permits the accommodation of a larger number of parking spaces in comparison with parallel parking. The angle of the park can vary from 30° to 90° depending on the type of environment and width of roadway.

Where the angle to the direction of travel is less than 90 degrees drivers normally enter the angle parking space in a forward direction. Where the angle is at 90 degrees drivers generally continue to enter in a forward direction, however, there is an increasing trend for drivers to reverse in. Where an RCA wishes to specify the direction of entry into angle parking it must install signs indicating the required direction – ‘forward in’ or ‘reverse in’.

Table 5.3 provides some indicative dimensions of spaces for varying degrees of forward entry. Further, and more detailed, information is available in AS 2890.5:1993

<table>
<thead>
<tr>
<th>A - angle of park</th>
<th>30°</th>
<th>45°</th>
<th>60°</th>
<th>90°</th>
</tr>
</thead>
<tbody>
<tr>
<td>B - Space width</td>
<td>2.5</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>C - space width parallel to kerb</td>
<td>5.0</td>
<td>3.7</td>
<td>3.0</td>
<td>2.6</td>
</tr>
<tr>
<td>D(^2) – lateral depth of space</td>
<td>4.1</td>
<td>4.8</td>
<td>5.1</td>
<td>4.8</td>
</tr>
<tr>
<td>M(^3) – manoeuvre space</td>
<td>2.9</td>
<td>3.5</td>
<td>4.3</td>
<td>5.4</td>
</tr>
</tbody>
</table>

1 uses dimensions from the high use car category in AS 2890.5:1993.

2 where parking is to a low kerb which allows 600mm overhang

3. gives the lateral space required when moving into and out of a parking space

### 5.4 Vehicle classes

#### 5.4.1 Taxi stand

As noted in section 5.3, taxi stand dimensions are similar to those required for standard vehicles. The signing and marking requirements for taxi stands are contained in section 6.
AS 2890.5 provides guidance on locating taxi stands, as well as the overall number of taxis to be catered for within a taxi stand.

### 5.4.2 Bus stops and bus or coach parking

Bus parking requirements should be based on either rigid or articulated vehicle designs, depending on the bus fleet in operation. Buses are generally treated the same as heavy vehicles with regard to base vehicle design. Dimensions for buses and coaches are described in section 5.3.

Coach parking should be provided where there has been a need identified, particularly in tourist locations and areas servicing entertainment facilities. The need for separate coach parking can also occur where the drivers otherwise attempt to park in a bus stop used by scheduled bus services. Coaches are often larger than normal scheduled service buses, with parking bay sizes similar to those required by articulated heavy vehicles (see section 5.3). Where there is limited space, sites can be designated pick-up or drop-off zones (coach stops), with the coach directed to another area for long-term parking.

When locating bus stops, it is essential that consideration be given to providing sufficient footpath space to ensure that pedestrians (including mobility devices) waiting at the bus stop do not hinder the through passage of users of the footpath (see ARTA’s *Bus stop infrastructure design guidelines*). Advice on the location and provision of school bus stops is provided in Land Transport NZ Traffic Note 44 ‘Safe siting of school bus stops’.

### 5.4.3 Heavy vehicle parking

Heavy vehicle parking at the roadside is generally created by a specific need, rather than as part of a standard parking facility. Loading zones at a kerbside are not frequently required to meet the needs of typical inter-city, maximum-sized heavy vehicles. However, truck stops, freight interchanges and other similar areas require consideration of the needs for parking these larger heavy vehicles.

There are many different types of heavy vehicles and these must be assessed prior to developing any scheme that involves provision for parking such vehicles. Dimensions of these types of vehicles are prescribed in the Land Transport Rule: Vehicle Mass and Dimension 2002, while suggested parking bay dimensions are described in section 5.3. Further information on dimensions and design principles is contained in AS 2890.2: 2002.

### 5.4.4 Motorcycle parking

Motorcycle parking is typically provided where there has been a need identified, rather than as a standard requirement. Motorcycle parking can often be accommodated in spaces that are too constrained for other classes of motor vehicles.

The marking and signing requirements for motorcycle parking are included in section 6.

### 5.4.5 Cycle parking

Cycle parking facilities typically consist of stands, enclosures or lockers. Stands can be considered as short-term parking devices located in almost any position and can be suitable in locations with a high level of passive security, eg outside shops. Enclosures are communal compounds, used for instance at workplaces, providing protection from the weather and having a higher degree of security. Bike lockers provide a high level of security for individual cycles and are located for instance at passenger transport interchanges.
When providing cycle parking facilities on the footpath, care should be made with respect to ensuring that the facilities (with cycle attached) do not block the movements of others using the footpath. Stands should be placed a minimum distance of 1 m apart to ensure that two cycles can be attached to the stand (one on either side) and that access to the cycle is still maintained. Similarly, adequate space should be left at each end of the stand in order to allow safe and easy access (for instance, without having to stand in the road) and to ensure that the protruding wheels of parked cycles don’t encroach into the road.

5.4.6 Emergency service vehicles

If specifically designing for these larger types of vehicles (eg fire engines and ambulances), the parking bay dimensions will be similar to those of a large rigid vehicle, contained in section 5.5.

5.4.7 Others

There are other special types of vehicles that should be taken into consideration when developing parking requirements for a facility or area. These can include:

- **Vehicles with trailers**: Austroads *Guide to traffic management, Part 11: Parking* recommends these should be treated in the same manner as truck parking in relation to stall width and depth, tracking paths, etc. Dimensions can be found in AS 2890.2, while parking bay dimensions can be found in section 5.3.

- **Motor-homes**: There are some situations where parking needs to be provided for the overnight parking of vehicles, in particular, motor-homes. Parking associated with these kinds of vehicles for overnight use is typically catered for within off-street car parks that are normally close to empty at night. Special facilities may need to be provided for overnight parking requirements.

- **Mobility devices**: Mobility devices may be ridden on the footpath and riders will prefer to park their device on the path if they are not able to use it at their destination. However, some RCAs have experienced problems with such devices parked on the footpath or even on the roadway. Demand for parking for devices is likely to remain low but RCAs are able to create special parking facilities if the demand indicates this is necessary or desirable.

- **Vehicle recharging sites**: Increased use of electric vehicles will see the demand for locations where such vehicles may be recharged at the kerbside.

5.5 Car park design

5.5.1 Geometry

The layout and geometric characteristics of parking facilities are important factors for both usability and safety of the facility. Further information on specific geometric uses can be referenced from AS/NZS 2890.1, AS 2890.2 and AS 2890.5. In summary, factors that should be considered when designing parking areas include:

- horizontal and vertical alignment
- provision of parking spaces where sight visibility is not adequate
- tracking paths for vehicles entering into and leaving from angled parking spaces
- surface condition and slope of parking spaces
• the location of the parking facility access: these should be located in areas where there is adequate sight distance along the main road from the car park access. This is particularly important in rural areas, given the high speeds of approaching vehicles and time required by heavy vehicles to accelerate and exit from the parking facility

• location of street furniture in relation to parking spaces

• location of disabled parking and ramps in relation to buildings and access to destinations

• pedestrian and mobility device access within the parking area (see below).

5.5.2 Pedestrians and mobility devices

Consideration must be given to providing a friendly environment for pedestrians and mobility devices free from (or with a limited number of) obstructions. Personal security issues such as lighting, clear paths and the provision of security systems should be considered as part of a design. See section 4.2 on urban design considerations.

5.5.3 Surface condition of the parking space

The surface of a parking space or area should be relatively flat, formed and free from any obstructions that may cause harm to road users.

For people with disabilities, ‘the surface condition shall consist of an unobstructed area having a firm plane surface, all at one level, with a fall not exceeding 1:40 in either direction of parking or at 90 degrees to it, or 1:33 if the surface has a bitumen seal’ (AS 2890.5: 1993). If possible, however, a gradient of 1:50 is preferred.

Coloured road surfaces can also be provided to reinforce the use of reserved parking spaces by disabled users. The TCD Rule reserves the use of blue surfaces on roadways for marking such spaces. This is a common feature overseas. In addition, the disabled parking symbol specified in Part 3 Schedule 2 of the TCD Rule should be marked (see photo 5.2).

5.5.4 Lighting and security

When designing either on- or off-road parking facilities, security of those using the facilities must be taken into consideration to ensure poor design does not hinder or limit the use of the facility (eg drivers being unwilling to use a car park due to personal or vehicle security concerns). The following should be considered when developing parking areas:

• adequate and consistent lighting

• design of open spaces where those entering or leaving vehicles are not walking through narrow areas where lighting is insufficient

• limited vegetation that can provide cover

• provision of security surveillance systems.
6 Linear parking

Linear parking occurs along individual lengths of road either adjacent to the edge of the road or in the centre of the road. It can be either parallel to the kerb or at an angle – most commonly 30°, 45°, 60° or 90° (at right angles to the kerb). The signs and markings used to control linear parking are described below.

6.1 Signs

6.1.1 Sign specifications

Specifications for traffic signs associated with linear parking are described in the TCD Rule. The changes made to the rule in the TCD Rule Amendment 2010 included a significant change to the manner in which parking signs are defined. The TCD Rule provides general principles on how the content of a parking sign is assembled and displayed, singly or in combination with other parking and special vehicle lane signs.

This section provides some examples of parking signs to demonstrate meaning and use as well as providing advice on how they should be placed in relation to a linear parking restriction. It is not practicable to describe the full range of parking signs that are permitted by the TCD Rule and reference should be made to the R6 sign series contained in Schedule 1 of that rule.

6.1.2 General

Signs (including supplementary signs) that indicate the extent of a parking restriction must meet the general requirements of any traffic sign and, in particular, be placed so they are visible and legible and allow adequate time for the intended response from road users (see clause 3.1 of the TCD Rule).

Where practicable, a linear parking restriction other than a bus stop, must be marked on the section of road an RCA has authorised for that restriction. Linear parking restriction signs must also be installed but in this case there must be:

- a sign within the linear parking restriction and close to the end of the restriction furthest from an approaching driver;
- additional signs at intervals of no more than 200 m.

Where the linear parking restriction is not marked it must be indicated by means of signs. There must be:

- a sign at each end of the linear parking restriction; and
- additional signs at intervals of no more than 100 m.

A sign incorporating the letter ‘P’ or ‘$P’ denotes a parking restriction applying between 8 am and 6 pm on all days except public holidays, unless otherwise specified. Other signs apply all day every day unless otherwise specified.
Care should be given to the placing of sign posts to ensure they do not impact on the opening of car doors – for instance, placing signs in the middle of disabled parking space may prevent the vehicle’s door being opened or affect access to any mobility device required.

6.2 Markings

Markings are an important part of parking control and can be the required mechanism for defining a restriction or help reinforce a restriction imposed by a sign. In addition, marking can provide guidance on how parking spaces are to be used.

6.2.1 General

The legal requirements for the installation of markings and their dimensions are included within the TCD Rule.

The types of materials (and their tolerances) used for roadway markings should be used in accordance with Transit’s TNZ M/20: 2003 Specification for long-life roadmarking materials and TNZ M/7:2006 Specification for roadmarking paint. Other materials may be used where sufficient evidence of the performance of the markings has been provided.

6.2.2 Parallel parking

Parallel parking is the most common form of on-road parking. The marking of permitted parking should be based upon the demand for parking envisaged, as indicated below.

<table>
<thead>
<tr>
<th>Demand for parking</th>
<th>Types of parallel marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>May be marked by a white edge line a distance 2–2.5 m from the kerb</td>
</tr>
<tr>
<td>Moderate</td>
<td>May be marked with the inverted ‘L’ or hockey stick markings and dashed white lines (see figures 6.4 and 6.5)</td>
</tr>
<tr>
<td>High</td>
<td>Individual parking spaces should be marked with either inverted ‘L’ or ‘T’; if additional delineation is required, edge lines should be considered – refer to figure 6.6</td>
</tr>
</tbody>
</table>

Examples of parallel parking layouts are included below.

Figure 6.1 Moderate demand for parking (shoulder > 3 m)
Drivers are not permitted to obstruct a driveway. Specifically they may not stop, stand or park at or within 1 m of a driveway (Road User Rule). This requirement can be reinforced by either providing No Stopping lines across the driveway or preferably by showing the extent of parking, as shown in figure 6.1, 6.2 or 6.3. Where No Stopping markings have been installed, the RCA should include reference to them in their bylaw and they must if the No Stopping restriction extends beyond 1 m from the driveway.

Figure 6.2 Moderate demand for parking (shoulder 2.3–3.5 m)

![Moderate demand for parking](image)

Figure 6.3 High demand for parking

![High demand for parking](image)

### 6.2.3 Angle parking

Parking can be provided with a range of angles, most commonly 30°, 45°, 60° and 90° to the kerb or edgeline.

Unless the surface makes it impracticable to do so, angle parking spaces must be indicated by parallel lines applied to the road surface and must be marked in white paint (TCD Clause 12.7).

Angle parking should be avoided on arterial high-speed routes where disruption to through-flow traffic should be kept to a minimum. (See section 5 for comments.) Additional measures such as kerb build-outs may be used to protect parked vehicles and allow drivers leaving intervening driveways or intersections to gain visibility past angle-parked vehicles protected from through vehicles.

Figure 6.4 Angle parking

![Angle parking](image)
6.3 No Stopping

When an RCA prohibits vehicles from stopping road users must be advised of the restriction by one of the following:

- no stopping markings where the restriction is imposed at all times;
- no stopping signs where the restriction is imposed at all times or for specified periods of time;
- clearway signs where the restriction is imposed for a period to provide an additional lane or to ensure free-flowing movement of traffic in an adjacent lane when an additional lane
- special vehicle lane signs

6.3.1 No stopping markings

If marked, no stopping restrictions must be marked by a broken yellow line, not less than 0.1 m wide. The broken line must have strips not longer than 1 m and gaps not longer than 2 m (see figure 6.5). The markings must be located no further than 1 m away from the adjacent kerb. Where short lengths of no stopping markings are used (eg less than 30 m), then the shorter gap length of 1 m may be used. Where longer lengths of no stopping markings are used (eg greater than 30 m), the maximum of 2 m gap length may be used.

Figure 6.5 No Stopping markings

No Stopping markings do not prevent vehicles from being parked to the left of the markings where there is no kerb, eg on a verge. However, a No Stopping sign relates to the full width of the road reserve and prohibits vehicles from being parked on a verge to the left of the roadway (see figure 6.6).

Figure 6.6 Stopping beyond the roadway
6.3.2 No stopping signs

No stopping sign must be installed:

- at right angles to the roadway (or in a way that clearly indicates the area of the road to which the restriction applies and facing in the direction of approaching traffic)
- at a distance of no more than 100 m between any two signs on roads with a speed limit up to and including 70 km/h, and no more than 500 m on roads where the speed limit exceeds 70 km/h.

The signs may be used with No Stopping markings (see section 1.3.1).

Table 6.1 No Stopping – signs and usage

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>No stopping (at all times)</td>
<td><img src="image1.png" alt="Sign example" /> For 1 km</td>
</tr>
<tr>
<td>No stopping (specified period)</td>
<td><img src="image2.png" alt="Sign example" /> 8am-6pm Mon-Sat, Includes 6pm-9pm Friday</td>
</tr>
</tbody>
</table>

6.3.3 Clearway signs

Clearway restrictions are used to assist with the free flow of traffic by ensuring the capacity of a traffic lane is not compromised by parked vehicles or may create an additional lane.

Table 6.2 Clearway – signs and usage

<table>
<thead>
<tr>
<th>Type of restriction</th>
<th>Use</th>
<th>Sign examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearway</td>
<td>To indicate the length of road that stopping is prohibited in order to provide an additional traffic lane during the specified time periods.</td>
<td><img src="image3.png" alt="Sign example" /> Clearway 7-9 am Mon-Fri 4-5:30 pm Mon-Fri</td>
</tr>
</tbody>
</table>

- Signs should be installed at right angles to the roadway facing approaching traffic on the side affected by the restriction.
- The following signs must be installed:
  - a ‘clearway begins’ sign at the beginning of the clearway;
‘clearway’ signs after each intersection along the length of the clearway and at intervals not exceeding 100 m; and

a ‘clearway ends’ sign at the end of the clearway.

Figure 6.7 Clearway signs along a length of road

6.3.4 Special vehicle lanes

Special vehicle lanes are lanes reserved for the use of a specific class or classes of vehicle and include bus, transit and cycle lanes. During the period it is operational no one may stop, stand or park within a special vehicle lane.

Where a special vehicle lane operates at all times, often the case with a cycle lane:

- the lane must be indicated by at least a lane line and, at the start and after each intersection along its length, appropriate words or symbols marked on the road surface
- the RCA may install the words or symbols at more frequent intervals and may also install signs to reinforce the restriction
- the RCA may reinforce the no stopping provision of special vehicles lanes by marking no stopping lines at critical locations along the lane length.

Where the lane does not operate continuously, most commonly for bus and transit lanes, in addition to the markings indicated above signs must be installed at the same locations describing the lane and its hours of operation. The RCA may install the words or symbols and signs at more frequent intervals.

Table 6.3 Special vehicle lanes – signs and markings

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign example</th>
<th>Marking words or symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle lane</td>
<td><img src="image" alt="Bicycle sign" /></td>
<td><img src="image" alt="Bicycle symbol" /></td>
</tr>
</tbody>
</table>

To indicate a reserved traffic lane for use by cycles
<table>
<thead>
<tr>
<th><strong>Bus lane</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To indicate a reserved traffic lane for use by buses, cycles, motorcycles and mopeds</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Bus only lane</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To indicate a reserved traffic lane for use only by buses</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Transit lane</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To indicate a reserved traffic lane for use by passenger services vehicles and other motor vehicles with at least the number of occupants indicated, cycles, motorcycles and mopeds</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Heavy motor vehicle lane</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>To indicate a reserved traffic lane for use only by heavy motor vehicles (ie vehicles over 3,500 kg)</td>
<td></td>
</tr>
</tbody>
</table>

Special vehicle lanes may be crossed over by a driver in order to park in a place clear of the special vehicle lane.
6.4  No Parking

Table 6.4 No Parking – signs and usage

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Parking (specific site requirements)</td>
<td><img src="image" alt="No Parking Sign" /></td>
</tr>
</tbody>
</table>

To indicate where no vehicle, other than those indicated, may park, stop or stand provided the driver remains in attendance.

Must always be used in conjunction with a vehicle type, e.g., bus stops and taxi stands.

6.4.1  Bus stops

The form of bus stops can be:

- kerbside, the most common, where buses stop parallel to the normal kerb line.
- indented bays where the kerb line is set back to allow a bus to stop clear of the travelled lane. These may be used on higher speed roads where the potential risk of collision with the bus is considered high. However, the bus driver must be able to safely re-enter the traffic stream when pulling away from the stop.
- bus boarders where kerbs are extended so that the bus stops within the traffic lane rather than pulling into a bay. These may be used where buses face difficulties and delays trying to merge back into the traffic flow and are most likely to be installed in central business areas or other places where speeds are low.

Further descriptions of these different forms including some design components and relative benefits of each are contained in ARTA’s Bus stop infrastructure design guidelines.

The length of the bus stop will depend on the form of the stop, the size of buses using the stop and the number of buses likely to use the stop at one time. Sufficient space should be allocated to the bus stop to allow a bus to pull into the kerb and out again from the space. A typical 12 m bus will, for example, require 8 m lead-in to a kerbside stop and 5 m to pull out if parking or other restrictions are in place at either end of the bus stop.

**Bus stops with signs and no markings**

Where a bus stop is installed with no markings and a single bus stop sign drivers, other than bus drivers, must not park within 6 m of the sign (Figure 6.8). This form of installation is generally only used in suburban or rural areas where there is little or no competing parking demand. In these cases the installation of the sign is primarily to indicate the location of the bus stop to intending passengers and bus drivers.
Where it is impracticable to mark the road surface or where the RCA, for aesthetic or other reasons (for example where a temporary bus stop is established for a special event or to replace a permanent stop during road works), decides not to mark the surface the extent of the bus stop restriction must be indicated by means of signs. There must be:

- a sign at each end of the stop; and
- additional signs at intervals of no more than 100 m (see Figure 6.9).

Bus stops with signs and markings

Where the road surface is suitable, bus stops should be marked on the section of road an RCA has authorised to be reserved for a bus stop. Bus stop signs must also be installed but in this case there must be:

- a sign within the bus stop and close to the end of the stop furthest from an approaching driver (Figure 6.10);
- additional signs at intervals of no more than 200 m (Figure 6.11).

Bus stop markings must be yellow and be used in conjunction with bus stop signs. The words ‘BUS STOP’ may be marked in one of two ways. The forms of marking are shown in Figures 6.10 and 6.11.
Bus stops and special vehicle lanes

Where a bus stop is required along the length of a special vehicle lane it must be marked and signed to enable buses to legally enter the lane and stop within it.

The bus stop marking should occupy the complete width of any special vehicle lane that permits use by cycles (and to a lesser extent mopeds and motorcycles) unless a minimum of 1.5 m can be provided between the edge of a stopped bus and the edge of the special vehicle lane (see Figure 6.12 which describes a bus stop within a cycle lane).

At 1.5 m or greater it is possible for a cyclist to pass a stopped bus without crossing into the adjacent lane. With lesser distances cyclists face increased risks. Cyclists might pass too close to the bus in attempting to stay within the lane or motorists may assume cyclists should be able to stay within the lane and give them less clearance when passing. If the bus stop marking is the same or greater width than the cycle lane it is evident to all users that a cyclist is likely to have to cross into the adjacent lane to pass a stopped bus allowing all users to adjust their behaviour safely.

Figure 6.12 Marked bus stop within marked cycle lane
Note that specific details relating to cycle lanes should be referenced from the New Zealand Supplement to the Austroads Guide to traffic engineering, Part 14: Bicycles.

### 6.4.2 Taxi stands

The general requirements for placement of signs detailed in 6.1.2 apply for taxi stands.

Where marked, taxi stand markings must be yellow and be used in conjunction with taxi stand signs. The words ‘TAXI STAND’ or the word ‘TAXI’ may be marked as shown in Figures 6.13 and 6.14.

**Figure 6.13 Marked taxi stand**

![Marked taxi stand diagram]

**Figure 6.14 Alternate form of marked taxi stand**

![Alternate form of marked taxi stand diagram]

### 6.4.3 Other stops or stands

Stops or stands may be installed for other classes of vehicles.

Signs and yellow markings appropriate to the vehicle types may be installed in a similar way to those described in 6.4.2 for taxi stands. As some of the specific classes of vehicles can only be described in many words it is generally undesirable to mark these and rely on the area's border lines and signs.
Table 6.5 Signs and markings for other stops and stands

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign example</th>
<th>Marking words or symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Car pool stop</strong></td>
<td><img src="image" alt="Carpool Stop" /></td>
<td><img src="image" alt="CAR POOL" /></td>
</tr>
<tr>
<td>The area may only be used by a vehicle which is part of an approved car pooling scheme picking up or dropping off riders and the driver may not leave the vehicle.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Coach stop**                              | ![Coach Stop](image) | ![STOP COACH](image)    |
| The area may only be used by a coach for the purposes of loading or unloading passengers and the driver may not leave the vehicle. |

| **Pick-up and drop-off**                    | ![Pick Up Drop Off](image) | ![Pick Up Drop Off](image) |
| The area, commonly at an airport or other transport terminal, may only be used by a vehicle which is picking up or dropping off passengers and their luggage and the driver must remain with the vehicle. |

| **Shuttle stand**                           | ![Shuttle Stop](image) | ![SHUTTLE](image)       |
| The area may only be used by a shuttle plying for hire (similar to a taxi at a taxi stand) and the driver remains in attendance. |

| **Small passenger service vehicle stand**   | ![Small PSV Stand](image) | ![Small PSV Stand](image) |
| The area may be used by a shuttle, taxi or other small passenger service vehicle plying for hire and the driver remains in attendance. |
Tram stop

The area may only be used by a tram (light rail vehicle) for the purposes of loading or unloading passengers and the driver may not leave the vehicle.

Vehicle class not otherwise described

The area may only be used by a vehicle of the class or classes specified on the sign for the purposes of loading or unloading passengers and the driver may not leave the vehicle.

6.5 Loading Zones

The general requirements for placement of signs detailed in 6.1.2 apply for loading zones.

Where marked, loading zone markings must be yellow and be used in conjunction with loading zone signs. The words ‘LOADING ZONE’ may be marked as shown in figure 6.15 or the symbol ‘LZ’ with a number representing any time limit in minutes applying to the zone. An example for loading zone with a 5 minute limit is shown in figure 6.16.

When marked parallel to the kerb or roadway edge a loading zone must be indicated:

- at each end by continuous yellow lines at right angles to the kerb or road edge; and
- along the length by broken or continuous yellow lines parallel to, and between 2 and 3 metres from, the kerb or road edge

When marked at an angle to the kerb or roadway edge, a loading zone must be indicated by continuous yellow lines on either side of the loading zone at the appropriate angle to the kerb or road edge.

Figure 6.15 Loading zone
6.6 Reserved parking areas

Reserved vehicle parking areas are those that have their use restricted to a certain class of vehicle or user, such as motorcycles and disabled parking. Specific requirements for space dimensions can be found in section 5.

The general requirements for placement of signs detailed in 6.1.2 apply for reserved parking areas.

Where marked, reserved parking area markings must be yellow and be used in conjunction with reserved parking signs. Appropriate letters or symbols taken from the TCD Rule may be marked to identify parking spaces for a specified vehicle class or road user within reserved parking areas.

When marked parallel to the kerb or roadway edge a reserved parking area must be indicated:

- at each end by continuous yellow lines at right angles to the kerb or road edge; and
• along the length by broken or continuous yellow lines parallel to, and between 2 and 3 metres from, the kerb or road edge

When marked at an angle to the kerb or roadway edge, a loading zone must be indicated by continuous yellow lines on either side of the loading zone at the appropriate angle to the kerb or road edge.

### 6.6.1 Parking for people with disabilities

Where the road surface is suitable, parking areas for people with disabilities should be marked on the section of road an RCA has authorised to be reserved for vehicles displaying disabled parking permits.

Parking areas for people with disabilities must be have signs and, where marked, must be bordered by lines of yellow paint and may use the 'mobility' symbol. The surface area of the spaces reserved for the disabled may be marked in blue. Blue marking is restricted to this use.

**Figure 6.17 Parking for disabled**

References to disabled parking requirements (such as the appropriate legislation, provision of facilities, reference to layouts and design, etc) can be found in section 4.3.
### 6.6.2 Other reserved parking areas

If words or symbols are marked on the road surface they must comply with the TCD Rule. As some of the specific classes of vehicles or users can only be described in many words it is generally undesirable to mark these and rely on the borderlines and signs. Signs may be required more frequently than the legal minimum to adequately explain the nature of any reservation.

**Table 6.7 Reserved parking signs**

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign examples</th>
<th>Marking words or symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cycle stand</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area reserved for cycles.</td>
<td>![Cycle sign]</td>
<td>![Cycle symbol]</td>
</tr>
<tr>
<td><strong>Mobility devices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area reserved for mobility devices.</td>
<td>![Mobility device sign]</td>
<td></td>
</tr>
<tr>
<td><strong>Motor cycle parking</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area reserved for motor cycles and mopeds.</td>
<td>![Motorcycle sign]</td>
<td>![M/C symbol]</td>
</tr>
<tr>
<td><strong>Bus parking</strong></td>
<td>Area where buses stop for long terms without a driver present (for example, between peak hour services, at events or tourist destinations).</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Tour coaches</strong></td>
<td>Area reserved for tour coaches at or near tourist destinations. May be installed to discourage tour coaches from using scheduled service bus stops.</td>
<td></td>
</tr>
<tr>
<td><strong>Shuttle parking</strong></td>
<td>Area reserved for shuttle vans.</td>
<td></td>
</tr>
<tr>
<td><strong>Carpool parking</strong></td>
<td>Area reserved for carpool operations and vehicles parked display an appropriate permit.</td>
<td></td>
</tr>
<tr>
<td><strong>Heavy motor vehicle parking</strong></td>
<td>Area reserved for heavy vehicles (vehicles over 3,500 kg)</td>
<td></td>
</tr>
<tr>
<td><strong>Campervan parking</strong></td>
<td>Area reserved for campervans.</td>
<td></td>
</tr>
<tr>
<td><strong>Vehicle class not otherwise described</strong></td>
<td>Area reserved for classes of vehicles not otherwise described above. Examples include 'Authorised vehicles', 'Diplomatic Corps', 'Emergency Vehicles', 'Police', 'Small PSV'.</td>
<td></td>
</tr>
</tbody>
</table>
6.7 Parking – time limited

Parking areas may have their use time limited. While reserved spaces described in 6.6 may also be time-limited this section describes areas limited in their use solely to a length of time and not to class of vehicle or user. Specific requirements for space dimensions can be found in section 5.

The general requirements for placement of signs detailed in 6.1.2 apply for time limited parking areas.

Where marked, time limited parking area markings must be white (see 6.2.2 and 6.2.3) and be used in conjunction with time limit parking signs.

Appropriate letters or symbols taken from the TCD Rule may be marked to identify the specific time limit applying to parking spaces. However, these time limits would generally only be marked where there is space for a limited number of vehicles and the linear restriction is within a zone restriction having a different underlying time limit (see section 7).

Table 6.8 Time limited parking – signs and usage

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking duration</td>
<td><img src="image" alt="P 30" /> <img src="image" alt="P 4 hr" /></td>
</tr>
<tr>
<td>The maximum parking duration is depicted by means of the time in minutes for periods less than 4 hours, hours up to 24 hours and days thereafter. Common periods are 2, 5, 10, 15, 30, 60, 90, 120 or 180 minutes and 4, 6 or 8 hours.</td>
<td></td>
</tr>
<tr>
<td>Paid parking</td>
<td><img src="image" alt="P $ 60" /></td>
</tr>
<tr>
<td>The period and fees must be displayed on or nearby the parking machine. However, if the RCA wishes to show any time limit applying signs may be installed with the duration shown as described above.</td>
<td></td>
</tr>
<tr>
<td>Supplementary information</td>
<td><img src="image" alt="P 30 Mon-Fri" /> <img src="image" alt="Includes 6pm-9pm Friday" /></td>
</tr>
<tr>
<td>Where the days or hours the restriction applies differ from the standard 8am-6pm every day except public holidays a supplementary plate may be installed below, or the information is incorporated within, the sign. Either form is considered to be one sign for the purposes of numbers of signs permitted at one location.</td>
<td></td>
</tr>
<tr>
<td>Other times</td>
<td><img src="image" alt="P 30 Other Times" /></td>
</tr>
<tr>
<td>The use of the words ‘other times’ means all times within the standard 8am-6pm every day except public holidays that are not covered by any other parking restriction signs for the same location which describe specific periods.</td>
<td></td>
</tr>
</tbody>
</table>
6.8 Paid parking

Where parking machines are installed for individual parking spaces no traffic signs are required. Where a parking machine is installed for multiple spaces the extent of the area covered by the machine must be signed to at least indicate that payment is required (ie by use of, for example, a ‘P$’ symbol or the words ‘Pay and Display Area’). For either case the fees, time limits and other conditions must be installed on or next to the parking machine.

6.9 Areas with multiple restrictions

It is common for kerbside parking spaces to have a number of restrictions that each apply for a different period of a day or week.

No more than four parking signs, or a special vehicle lane sign and no more than three parking signs, may be installed in the same location. Where there is more than one parking sign, with or without a special vehicle lane sign, the TCD Rule defines an order these multiple signs must conform to. The general principal that has been applied is that the most restrictive requirement should appear at the top of the display of signs.

If a linear parking area is marked and has a restriction which requires yellow marking this must be marked even if the restriction only applies for part of the time. If this same area also has a restriction at other times and for which white lines would normally be applied there is no requirement to install the white markings. This means the most restrictive requirement is marked.
7 Zone parking areas

7.1 Introduction

Zone parking is a term used to denote a parking restriction that is common or uniform throughout an entire area generally comprised of a number of roads or sections of roads.

Within such a zone parking area there may be a range of linear parking restrictions including:

- No stopping restrictions imposed by the Road User Rule (eg restriction of parking within 1 m of a driveway, 6 m of an intersection);
- No stopping and no parking restrictions, loading zones, reserved parking spaces and time limited restrictions imposed by the RCA.

However, it is envisaged that these linear parking restrictions would affect a minor proportion of the parking spaces within the zone parking area.

7.2 Signs

Specifications for traffic signs associated with zone parking are described in the TCD Rule. ‘Zone Begins’ and ‘Zone Ends’ must be at least 600 mm wide (compared to the normal minimum for parking signs of 300 mm).

Zone parking signs must meet the general requirements of any parking sign and, in particular, be placed so they are visible and legible and allow adequate time for the intended response for road user.

7.3 Positioning of signs

Signs relating to a zone parking area must (subclause 12.5(3) of the TCD Rule) be installed as follows:

(a) a ‘Zone Begins’ sign at each entry point to the zone;
(b) a ‘Zone Ends’ sign, or a ‘Zone begins’ sign where this is the entry to a zone with a different restriction, at each exit point from the zone (see Figure 7.1); and
(c) a ‘Zone’ sign within the zone:
   (i) at intervals sufficient to notify road users but not more than 200m apart unless the zone is interrupted for more than 200m by a linear parking area that is longer than 200m; and
   (ii) after an area where a different restriction applies (see Figure 7.2).

Figure 7.1 Zone parking area begins and ends

![Zone parking area begins and ends](image)
**Figure 7.2 Zone signs within a zone parking area**

**Table 7.1 Zone parking – signs and use**

<table>
<thead>
<tr>
<th>Type of restriction and use</th>
<th>Sign examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zone parking BEGINS or ENDS</strong></td>
<td><img src="image" alt="Sign examples" /></td>
</tr>
<tr>
<td>To indicate the extent of the parking zone. Sign to define the type of parking zone</td>
<td></td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="Sign examples" /></td>
</tr>
<tr>
<td><strong>Zone parking repeater</strong></td>
<td></td>
</tr>
<tr>
<td>To act as a reminder of the existence of the parking zone</td>
<td><img src="image" alt="Sign example" /></td>
</tr>
</tbody>
</table>
8 Parking direction signs

Parking direction signs provide information to road users as to the location of parking areas. Parking directional signs can be of two types:

- standard static signs indicating types of parking and parking locations (see figure 8.1) – can be used to direct traffic to both on- and off-road parking facilities as well as other parking types, such as Park and Ride facilities

  Figure 8.1 Standard static parking direction sign (stating parking location and availability of toilet facilities)

- real time systems (see figure 8.2) – a mix of static and changing traffic information is provided to motorists through the use of variable message signs. The information can be automatically updated to advise the number of currently available spaces in specific car parks.

  Figure 8.2 Real time system

The types of information that may be included on direction signs are:

- location (name) of car park
- distance
- number of spaces available
- any vehicle and time restrictions
- facilities available at or near the car park (eg toilets or Park and Ride).

The type of system in place can assist in successfully directing traffic to the most appropriate facility and therefore aid in reducing congestion around urban areas.
9 Parking furniture

9.1 Fee-based systems

There are many different types of fee-paying systems and parking machines to control parking, including parking meters and vending machines (such as Pay and Display). These types of fee-paying systems are typically provided at on-street parking spaces, while off-street fee-paying systems include paying on entry/exit and paying on foot with access/exit controls provided.

9.1.1 On-street parking

Parking meters

Parking meters allow individual parking bays to be paid for with the available remaining time limit for each space shown on the parking meter. They can be provided on an individual parking bay basis by locating the parking meter adjacent to the car parking space, or for a collection or group of parking spaces through the use of a centralised parking meter.

Signs to indicate parking restrictions do not need to be installed if parking is controlled by parking meters that are located at, or adjacent to, each parking space. Parking spaces controlled by a centralised parking meter not adjacent to a parking bay need to be signed as being a parking meter controlled area – with signage at the start and end of the parking restriction as well as repeater signs as appropriate (see table 9.1). In both cases the meters must have the information pertaining to parking limits and fees attached to or next to the meter.

Types of parking meter include:

- **Mechanical** – Mechanical meters are the traditional-style meter that shows the time available. They are no longer widely installed since the introduction of electronic type systems. The main features are:
  - each parking space can have its own meter, either single or double headed
  - enforcement is effective but labour intensive
  - easy to use and convenient to drivers and parking officials.

- **Electronic** – These are conventional parking meters with electronic systems. They can be used in the same way as mechanical meters; however, information regarding parking rates and usage can be recorded, and tokens used instead of coins. The main features are:
  - rates can be easily altered
  - tokens can be accepted
  - data is stored within the system.
**Vending machines**

*Defined spaces*

These devices service a number of different car parking spaces. The driver must select the appropriate space when paying. The devices:

- can cater for 1–20 spaces
- contain information with which to undertake audits
- have reduced maintenance and labour costs
- can be used with card readers and other communication facilities.

*Pay and Display*

Pay and Display machines are a common form of payment system used in large areas. The system operates with the driver paying the machine and then displaying the vended ticket in view of enforcement officers within the vehicle. They can service a large number of vehicle spaces, most likely up to 20 spaces or more per machine.

The machines can:

- provide auditing of cash received
- pre-programme rate and time changes
- have cash security
- be used with card readers and other communication facilities, such as cellphone payment systems.

Signs to indicate parking restrictions where payment is required need to be signed with signs at the start and end of the parking restriction, as well as repeater signs as appropriate (see table 9.1 and figure 9.1).

**Table 9.1** Paid parking signs

<table>
<thead>
<tr>
<th>Type of restriction</th>
<th>Use</th>
<th>Sign examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking by payment</td>
<td>To indicate a fee payment system is in place over the length over the road</td>
<td><img src="image" alt="Sign examples" /></td>
</tr>
</tbody>
</table>
9.1.2 Off-road parking controls

Commonly used methods of control for off-street car parks include vending machines (Pay and Display) or drivers obtaining a ticket on entry to the car park and then paying either:

- at the exit when leaving the car park; or
- at a central fee-paying machine on foot prior to leaving the car park (and being provided with a token to permit egress from the car park).

Such systems require access and exit control mechanisms to be in place.

9.2 Access and exit controls

9.2.1 Barrier arms

Barrier arms are generally needed where some form of control is required over fee-paying systems in off-road parks.

9.2.2 Bollards

Use of individual car parking bays can be controlled through the use of bollards that can be raised or dropped by the authorised user to allow access.

9.3 Locations of types of parking systems

Care should be taken in the design and placement to ensure that access by all road users (including the disabled – see section 4.3) is possible and the location is secure. It is important people parking their vehicle do not have to go out of their way to pay for parking.

Accordingly, it is recommended that centralised parking meters and Pay and Display vending machines that serve a number of parking spaces be located no more than equivalent to ten parallel parking bays apart. That is, each central parking meter or Pay or Display machine is to serve a preferred maximum equivalent to five parallel parking bays either side.
10 Temporary traffic management

Wherever temporary parking restrictions are required, specific signs should be installed to reflect the changes, with the existing signs covered up or removed.

Any changes to the normal operating procedures of the road will need to have a temporary traffic management plan (TMP) approved by the RCA. In most cases, when developing a TMP, reference should be made to the Code of practice for temporary traffic management (CoPTTM) or CoPTTM Local roads supplement.

10.1 Temporary parking restrictions

Temporary parking restrictions should be installed in accordance with the approved TMP. The TMP must consider and relocate any loss of special parking areas (ie taxis, buses, disabled parking) elsewhere.

10.2 Parking for recurring events

Where there are particular sites that have recurring events (such as sports arenas, parks and concert facilities), there should be some arrangement made with the local authority for a permanent strategy to outline the parking issues at the site as well as ways in which parking can be controlled and enforced. This can be part of a total event management strategy and should include consultation with the local authority, residents and business community, police and other emergency services to minimise the impact during the event.

Any permanent signing must be supplemented by means by which the public are aware of the day and time restrictions that apply.