



Auckland Transport Code of Practice

Chapter 11
Parking



11 Parking

11.1 Introduction

Parking is a necessary part of vehicle based transport. It provides for vehicles to be stopped while they are loaded/unloaded and stored while they are not in use or when a driver leaves the vehicle to complete a journey by other means.

Auckland Transport provides on-street parking within the road reserve and is also responsible for the design, construction and management of some off-street parking facilities including park-and-rides at train and bus stations, and parking areas or buildings in town and city centres.

For private off-street parking facilities Auckland Transport has an interest in ensuring that appropriate standards are used for the design and construction of these facilities so that they function efficiently and effectively with minimal impact on the operation of the road network.

The demand for parking is driven by land-use. Parking can be provided either in association with the individual land-uses, or as a shared facility in the general area of the land-use. Demand can also be managed through a combination of parking and/or travel pricing to discourage car-use and the provision of alternative modes of transport.

It is envisaged that parking demand management and requirements to provide parking in association with land-use will be prescribed by Auckland Council through the Unitary Plan.

11.2 Design Philosophy

The design of car parking needs to balance efficiency of use of land with efficiency of access and use of the parking. Adopting smaller dimensions for parking bays allows more parking to be squeezed into an area of land/building, but is a trade-off with ease of use as tighter spaces make entry and exit manoeuvres more difficult (particularly for larger vehicles) and also make it more difficult for drivers and passengers to enter and exit the vehicle.

Consequently the code allows for two different design approaches.

11.2.1 Simplified Design

This code provides a table of basic parking dimensions suitable for on-street parking and small to medium at-grade open-air off-street parking. The space dimensions in this table are considered suitable for medium to high turn-over parking by casual users, e.g. retail sites, commercial sites and community facilities.



Table 31: Parking Space and Manoeuvring Dimensions

PARKING ANGLE	WIDTH OF PARKING SPACE	DEPTH OF PARKING SPACE		MANOEUVRING SPACE	TOTAL
		FROM WALL*	FROM KERB**		
90°	2.5	5.0	4.0	7.7	12.7
	2.6			7.0	12.0
	2.7			6.7	11.7
75°	2.5	5.2	4.2	6.3	11.5
	2.6			5.2	10.4
	2.7			4.2	9.4
60°	2.5	5.2	4.2	4.1	9.3
	2.6			3.5	8.7
	2.7			3.3	8.5
45°	2.5	5.0	4.2	3.0	8.0
	2.6			3.0	8.0
	2.7			3.0	8.0
30°	2.5	4.0	3.4	2.8	6.8
	2.6			2.8	6.8
	2.7			2.8	6.8
0° (Parallel)***	6.0	2.1	2.1	3.7	5.8

*** Note that for parallel parking the “width” above is effectively the length of the space along the kerb. Where a parallel parking space is open ended (eg adjacent to No Stopping Lines) this length can be reduced to 5.0 metres.

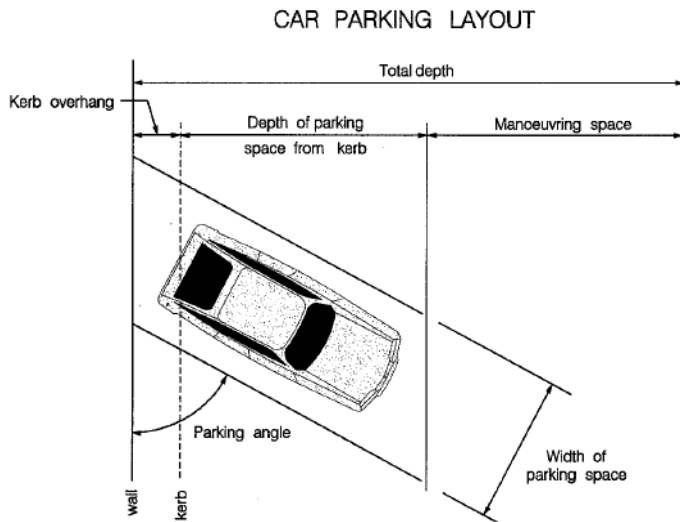


Figure 37: Car Parking Layout

11.2.2 Site and Usage Specific Design

For more complex parking structures such as basements, undercrofts, and multi-deck parking, specific design needs to be undertaken to address the more complex clearance requirements for walls, columns and ramps.

Where large parking facilities are being built and a significant portion of the use is likely to be long-stay and/or frequent user e.g. employee parking areas, long-stay parking buildings, park-and-ride facilities - then consideration should be given to using specific design and adopting tighter parking dimensions and manoeuvring spaces for areas allocated to employees/long-stay users to optimize use of land.

The Australia and New Zealand Standard, AS/NZS 2890.1:2004 provides guidance for specific design to address these issues.

11.3 On-Street Parking Design

On-street parking is generally allowed subject to the provisions of the Road User Rule, which is not generally required to be marked on site, and subject to any specific restrictions that Auckland Transport determines and indicates with appropriate marking and signs.

The unsigned or unmarked parking restrictions put in place by the Road User Rule include:

- no parking on a road without due care or without reasonable consideration for other road users.



- no parking on a road so close to a corner, bend, rise, dip, traffic island or intersection, as to obstruct or be likely to obstruct other traffic, or the view of drivers approaching the corner, bend, rise, dip, traffic island or intersection.
- no parking on or within 6m in advance on a pedestrian crossing.
- no parking within 6m of an intersection or within 1m of a driveway.
- no parking on footpaths, cycle paths or special vehicle lanes.

Signed or marked parking restrictions put in place by Auckland Transport can include:

- restrictions on the times of day when parking can occur
- restrictions on the class/classes of vehicles that can park in a particular location
- restrictions on the users of parking in a particular location (mobility parking, residents only parking)
- restrictions on the maximum duration a vehicle can be parked in a location
- payment requirements for use of the on-road parking in a location (pay-and-display, parking meters, etc.)
- prohibition of parking in a specific location

In areas where there is likely to be a significant level of demand for on-street parking or where the demand for on-street parking is likely to conflict with the operation or use of the road, specific design of on-street parking will be required. The design should include both the physical layout of the parking and the regulatory controls, signs and markings that will be needed to manage the parking.

The design of on-street parking needs to have regard for the function of the road. In a road with high place-function parking can make a positive contribution through providing a buffer between moving vehicles and pedestrians, and by narrowing the available carriageway width and helping to slow traffic speeds. However the benefits of such parking should be considered in the context of the overall streetscape design, including pedestrian access, street planting, furniture and visual character.

In a road with high movement-function, parking needs to be designed to minimise impact on the operation of the traffic lanes either through limiting the provision of parking or providing for entry and exit manoeuvres to be completed without impeding the through-traffic.

The design of on-street parking needs to give particular consideration to safety of other road users. While kerb-side parking can benefit pedestrian by separating the footpath from live traffic lanes it can reduce the safety for pedestrians crossing a road. Parking layouts should include gaps in the parking, preferably with kerb build-outs to the edge of the live lanes at point of pedestrian demand so that pedestrians can be seen by approaching drivers when crossing the road and are not hidden between parked cars or exposed to vehicles manoeuvring into and out of parking spaces. Careful consideration needs to be given to the amount of separation



between parked vehicles and through-traffic allowing for the opening of doors to enter/exit vehicles, and allowing for reversing out of angle-parking spaces. Particular care with these issues is required for cycle lanes or on other routes where cycling is likely to occur.

Refer also to *ATCOP Chapter 13 Cycling Infrastructure Design* for issues regarding cycle lanes and *ATCOP Chapter 7 Road Layout and Geometric Design (Section 7.4 Standard Road configuration for road cross-section details)* for issues regarding allocation of space for on-street parking within the overall road cross-section.

11.4 Off-Street Parking Design

For small at-grade car parks the appropriate parking and manoeuvring dimensions from Table 31 must be adopted for the parking layout. The following issues should also be considered.

- Provision of entry and exit to the car park via one or more vehicle crossings (see *ATCOP Chapter 7 Road Layout and Geometric Design - Section 7.8 Vehicle crossings.*)
- Provision for circulation of vehicles within the car park and for on-site turning to avoid any reversing back onto the public road
- Provision for safe pedestrian movement between the car park and the adjacent activities it is serving
- Appropriate landscaping of the car park area
- Appropriate regulatory controls for the parking area to discourage parking in circulating areas and to define any time restrictions and/or charging for use of the marked car parks
- Allocation of mobility parking spaces to provide optimal access to the land-use/building being served by the car parking

For larger at-grade car parks and for more complex parking structures such as basements, undercrofts and multi-deck parking buildings the designers should refer to AS/NZS 2890.1:2004 for additional guidance.

For larger car parks additional consideration needs to be given to the entry lanes from the public road and providing sufficient uninterrupted entry distance to accommodate arriving cars without creating queues back onto the public roadway. This is particularly an issue where the management of the parking involves the issuing of tickets at point of entry with resultant queues at the ticket issuing gate. However, care is also required even where ticket issuing gates are not used to ensure that the entry lane does not become obstructed by vehicles manoeuvring into or out of spaces located too close to the point of initial entry off the public road.

The design of off-street car parking also needs to consider the safety of users. Pedestrian routes from the parking to the adjacent land-use need to be designed to minimize conflict with vehicles, and the personal safety of car park users needs to be addressed by designing for the safety principles of crime prevention through environmental design.



11.5 Mobility Parking

Mobility Parking spaces and suitable access routes between the mobility parking and the land-use being served must be provided as part of car parking provisions. The minimum number of mobility spaces required, and the geometric standards for mobility car parking and access are prescribed by the New Zealand Building Code D1 and NZS 4121.

11.6 Motorcycle Parking

Where there is a significant demand for motorcycle parking, it is desirable to allocate space specifically for motorcycle parking. Motorcycle parking can often make use of otherwise wasted areas that are too small to accommodate a car at the end of rows. Where such space is not available, design specifically for motorcycles can still have benefits in allowing multiple motorcycles to be parked in a space that would otherwise hold one car and avoid having motorcycles occupying general parking spaces or being parked on footpaths/access areas.

11.7 Cycle Parking

For cycle parking design and requirements refer to *ATCOP Chapter 13 Cycling Infrastructure Design*.

11.8 Loading Zones

Where there is demand for loading and unloading of goods particularly in commercial areas loading zones may need to be provided. The design of loading zones shall have consideration for the type and size of vehicles that are likely to utilise the loading zone. While a standard length parking space can accommodate many light courier vehicles the length of the space should allow for loading goods into and out of the rear of the vehicle. Larger spaces are likely to be required if trucks will be used, with consideration of both the length of truck and the means of loading or unloading. In some cases this can include lift platforms that extend from the back of the truck during loading and unloading. Loading zones should not be allocated within standard sized angle parking spaces as this encourages overlength vehicles to use the angled space and potentially results in obstruction of the aisle/manoeuvring area behind the space.

11.9 Special Parking

While most public parking demand is for light vehicles and can be met by standard sized parking spaces there are certain locations that are likely to generate demand for parking by larger vehicles. Examples of this are tourist attractions where there may be a need to accommodate parking by campervans and/or tour buses and near boat ramps where there is a need to accommodate the parking of boat trailers. At such sites it is recommended that dedicate facilities be provided for these types of vehicles to avoid having them parking inefficiently across



multiple standard size spaces. The number and size of special parking spaces should be chosen having regard for the likely demand created by the specific activity at the site.

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