20 Transportation

Introduction

Transport provides for the movement of people and goods, and is essential to the functioning of society. The establishment and use of transport (road, air, sea, rail, pedestrian) can generate both positive and negative environmental effects. The management of these effects must therefore be comprehensively integrated with the management of the effects of the use, development and protection of other resources of the City. Such an approach may lead to the imposition of restrictions on the use of resources to prevent reverse sensitivity effects on the transportation network that arise from incompatible land use activities locating close to the transportation network, and on parts of the transportation network itself. *[Amended by Consent Order 5/5/05]*

In noting this, it is recognised that the activity of transportation within the City relies on some existing physical resources. Section 5 of the Resource Management Act 1991 requires the potential of these resources to be sustainably managed. This may require adopting measures to prevent reverse sensitivity effects on those resources. *[Amended by Consent Order 5/5/05]*

Transportation via air, road, sea and rail connects the City with other centres and countries. Within the City the issues surrounding roading and pedestrian mobility are the most significant, in particular their safety, efficiency and effectiveness. This section focuses predominantly on roading issues.

Provisions for the operation and expansion of the airport at Momona, the operation of the Main South Railway Line, and maintenance and construction of State Highways have been made within the District Plan through designations. Provision for sea transportation has been made within the District Plan in a separate section on Ports. The continued operation of the Taieri Aerodrome is provided for by District Plan rules.

20.1 Significant Resource Management Issues

Issue 20.1.1

Establishing, maintaining, improving and using the transportation network may give rise to adverse effects on the environment.

Objectives: 20.2.1, 20.2.4
Policies: 20.3.1 - 20.3.3, 20.3.5, 20.3.6

Explanation

There is a wide range of adverse effects on the environment arising from the transportation network. Some of the adverse effects include:

- displacement of and loss of physical resources, such as buildings and public open space
- discharges to air (fumes and gases), to water (contaminants via stormwater), of animal and human waste, and of hazardous substances (eg spills from vehicles, discharges during construction - bitumen, oil etc)
- noise
- light glare from streetlights and car parking areas
- visual intrusion
- loss of townscape and heritage values
- activity on roads can impact on adjacent land use activities, especially in residential areas.

Issue 20.1.2

Traffic generating activities can cause adverse effects on:

(a) Pedestrian movement and safety.

(b) Traffic safety.

(c) The function of roads, including their through-route function.

(d) The efficient operation of intersections and roads.

(e) The physical structure and form of roads.

Objectives: 20.2.2, 20.2.4
Policies: 20.3.4 - 20.3.6

Explanation

The character, scale and intensity of activities, and where such activities are located can give rise to adverse effects on the transportation network.

The movement of pedestrians from one area to another can be restricted by roads and vehicle accesses. For some activities, such as those in the Inner City Area, traffic can be attracted from some distance.

Congestion can occur and pedestrian and traffic safety can be compromised in the immediate area. Car parking and loading of vehicles has the potential, if not adequately provided for or designed, to give rise to off-site requirements and therefore adversely affect traffic safety and the efficiency of the road.

For activities in the rural environment, high speeds mean extra care is required. High traffic generating activities on national or regional roads can impede the through-route function of those roads.

Similarly, the efficient operation of the roading network can be impaired if traffic generating activities are located too close to the intersection, have impaired visibility, insufficiently designed accesses, or too steep a gradient or too narrow a width for vehicles to access.

Heavy vehicles can have significant adverse effects on the roading network, parts of which are not designed for heavy axle loads.

The form of a road (ie width, construction, footpaths) may need to alter as a result of an increased number of vehicle movements.

Issue 20.1.3

Conflict arises where the transportation network is shared by different modes of transport or used by other activities.

Objectives: 20.2.3, 20.2.4
Policies: 20.3.5 - 20.3.8

Explanation

Users of the transportation network have different needs which is reflected in their transport choice. When facilities are shared, conflict between modes can occur and safety can be compromised, for example:

- vehicle accesses on 'Identified Pedestrian Frontages' within the Inner City Area have a significant potential to compromise pedestrian safety
- activities requiring the loading and unloading of goods in some instances use areas of the road or footpaths that impede traffic or pedestrian flows and safety
- heavy vehicle use of a road can damage roads thereby affecting their use by others
- reduced visibility for traffic at railway level crossings can result in potentially dangerous situations
- the safe and efficient movement of Campus generated pedestrian traffic is impeded by vehicles
- activities occurring on roads and footpaths can be incompatible with their function and reduce the safety of road users and pedestrians
- cyclists are vulnerable to conflict with motor vehicles.

Issue 20.1.4

Because of their character, scale, intensity and location, certain activities are potentially incompatible and may give rise to reverse sensitivity effects on transportation infrastructure
[Inserted by Consent Order 5/5/05]

Objectives: 20.2.2
Policies: 20.3.9

Explanation

The character, scale, intensity and location of activities can give rise to adverse effects on the transportation network. Such adverse effects can impact on the ability of transportation infrastructure to meet the reasonably foreseeable needs of future generations.

20.2 Objectives

Objective 20.2.1

Avoid, remedy, or mitigate adverse effects on the environment arising from the establishment, maintenance, improvement and use of the transportation network.

Issue: *20.1.1*
Policies: *20.3.1 - 20.3.3*

Explanation

Adverse effects resulting from the transportation network may be avoided, remedied or mitigated by the appropriate management of the network and its integration with surrounding land uses and activities.

Some examples of ways in which local impacts can be avoided, remedied or mitigated are landscaping around roading development, roadside planting and altering the road form and function to reduce vehicle numbers on local roads.

Objective 20.2.2

Ensure that land use activities are undertaken in a manner which avoids, remedies or mitigates adverse effects on the transportation network.

Issue: *20.1.2*
Policies: *9.3.4 - 9.3.6, 12.3.8, 20.3.4 - 20.3.6*

Explanation

Some land use activities may adversely affect the transportation network because of their character, scale, intensity or location. This includes reverse sensitivity effects produced by incompatible land use activities locating close to the transportation network. As such, in promoting sustainable management of the transportation network it is necessary to ensure that these adverse effects are avoided, remedied or mitigated. *[Amended by Consent Order 5/5/05]*

Objective 20.2.3

Achieve integrated management of the roading network, including pedestrian and cycle use, with rail, air and sea networks.

Issue: *20.1.3*
Policies: *9.3.5, 9.3.6, 20.3.7, 20.3.8*

Explanation

The road and rail transportation networks, Momona Airport and the commercial ports within the City at Port Chalmers and Dunedin constitute significant physical resources which contribute to the City's social, cultural and economic wellbeing.

Consideration of how these physical resources interact, together with their interaction with pedestrian and cycle use, is essential to achieve sustainable management of these resources. In terms of the provisions of the Act, the extent to which the Council can achieve integration is limited to the development of appropriate land use controls on the roading network, liaison, consultation, adoption of protocols and accords, implementing bylaws, providing information and undertaking of works and services.

Objective 20.2.4

Maintain and enhance a safe, efficient and effective transportation network.

Issues: *20.1.1 - 20.1.3*

Policies: *9.3.6, 12.3.8, 20.3.5, 20.3.6*

Explanation

Safety, efficiency and effectiveness require special consideration because of the reliance of people on the transportation network to achieve their social and economic wellbeing.

A control may achieve safety and efficiency, but it may not be effective in terms of providing for people's reasonably foreseeable needs. The safe, efficient and effective operation of the transportation network will be achieved by recognising the interdependence of the use of the physical resources comprising the transportation network and the use of the land adjacent to those resources. Effectiveness, although not specifically recognised in Part II of the Act, is an important consideration in achieving sustainable management.

Principal Reasons for Adopting Objectives

Transport infrastructure is a physical resource and a community asset. The network that this infrastructure makes up must be managed to ensure that any potential adverse effects on the environment are avoided, remedied or mitigated. It is also necessary to ensure that potential adverse effects (including reverse sensitivity effects) on significant transport infrastructure are avoided, remedied or mitigated. Further, to achieve the sustainable management of the transportation network it is necessary to ensure it is managed in a safe, efficient and effective manner. Integration of the different transport modes that make up the network will also promote sustainable management of the resource. *[Amended by Consent Order 5/5/05]*

20.3 Policies

Policy 20.3.1

Avoid, remedy or mitigate the adverse effects on the environment of establishing, maintaining, improving or using transport infrastructure.

Objective: 20.2.1
Methods: 11.4.1, 20.4.1 - 20.4.10
Rules: 10.5.2(i)(d), 22.5.2(xii)

Explanation

The establishment, maintenance, improvement and use of transport infrastructure, such as roads, car parks, loading areas, railway lines, airports, vehicle accesses, in many cases results in adverse effects which can, for example, detract from amenity values or diminish health and safety. In some cases it may be appropriate to avoid such adverse effects by use of an alternative route or promoting alternative means of transportation. In other cases those effects can be remedied or mitigated, for example identifying maximum noise levels, imposing height restrictions on areas in close proximity to airport flight paths, provision of adequate vehicle parking, removal of archaeological findings or the undertaking of landscaping.

Policy 20.3.2

Provide for the maintenance, improvement and use of public roads.

Objective: 20.2.1
Methods: 20.4.1, 20.4.2, 20.4.6, 20.4.7

Explanation

The maintenance of public roads, including footpaths and cycleways, is seen as providing for the reasonable expectations of people. Their benefit to the community is positive in providing needed access.

The ongoing maintenance of existing roads within the City to retain their safety and efficiency is necessary for the City to function. The adverse effects of road maintenance are no more than minor, and therefore should be allowed without undue formality.

Policy 20.3.3

Provide for activities on roads and footpaths where this:

(a) Is compatible with the function of the road.

(b) Is safe for road users and pedestrians.

(c) Has no more than minor adverse effects.

Objective: 20.2.1
Methods: 20.4.6, 20.4.9

Explanation

Roads are an important public space, with a number of social and economic activities being undertaken in areas not necessary for use by vehicles, for example market days, sandwich board signage and pavement cafe dining areas.

Policy 20.3.4

Ensure traffic generating activities do not adversely affect the safe, efficient and effective operation of the roading network.

Objective: 20.2.2
Methods: 20.4.1, 20.4.10

Explanation

The safety of people and communities is of prime importance in achieving sustainable management of the roading network. The nature and location of traffic generating activities can diminish people's safety.

In addition to safety, other factors of prime significance in ensuring the sustainable management of the roading network are the maintenance and enhancement of its efficiency and effectiveness. For example, a slip lane may be an efficient way of ensuring traffic is taken from the main flow of a road, but in order to achieve an improvement in the through-route function of a road it needs to be effective.

Policy 20.3.5

Ensure safe standards for vehicle access.

Objectives: 20.2.2, 20.2.4
Methods: 20.4.1 - 20.4.3, 20.4.5, 20.4.6

Explanation

Appropriate design and location of accesses can ensure that traffic movements and the through-route function of roads, particularly those in the rural environment, are not impaired.

Policy 20.3.6

Encourage heavy traffic to use appropriate routes.

Objectives: 20.2.2, 20.2.4
Methods: 20.4.1, 20.4.4, 20.4.5

Explanation

Adverse effects on the road structure and on amenity can be reduced if heavy vehicle use is limited to roads capable of absorbing any adverse effects generated. Use of appropriate roads will also result in more efficient use of the road network.

Policy 20.3.7

Maintain and enhance the safety of users of the transportation network at railway level crossings.

Objective: 20.2.3
Method: 20.4.6

Explanation

The safety of pedestrians, cyclists and motorists using railway level crossings needs to be continually maintained and enhanced through appropriate use of controls, such as warning lights or barriers, and protecting lines of sight.

Policy 20.3.8

Provide for the safe interaction of pedestrians and vehicles.

Objective: 20.2.3
Methods: 20.4.1, 20.4.3, 20.4.5 - 20.4.10

Explanation

Pedestrians are users of the transportation network. Pedestrian activity is also environmentally-friendly and in areas where traffic congestion occurs, efforts should be made to minimise potential adverse effects on pedestrian safety.

For example, a high level of pedestrian traffic is a key feature of Campus traffic flows. The large area covered by the Campus, coupled with its location relative to both the Inner City Area and the core part of the student housing resource, means that a significant volume of pedestrian traffic interacts with major roads. This has implications for resource use efficiency and the safety of pedestrians and drivers of vehicles. In order to ensure the successful integration of Campus-generated pedestrian traffic within the broader environment, localised traffic and pedestrian management is essential.

Policy 20.3.9

To sustainably manage transport infrastructure, particularly that of national or regional importance, in a way which will provide for its effective operation and preserve its capacity to meet the reasonably foreseeable needs of future generations, while avoiding, remedying or mitigating any adverse effects resulting from the operation of this infrastructure. *[Inserted by Consent Order 5/5/05]*

Objective: 20.2.2
Method: 4.4.1, 20.4.1, 20.4.10

Explanation

Managing infrastructure, particularly nationally and regionally important infrastructure to ensure its operation is effective and its capacity is preserved to meet the needs of future generations will provide a significant social and economic benefit to the community. Appropriate management of the adverse effects arising from the operation of infrastructure is also necessary to ensure sustainable management objectives are met.

Principal Reasons for Adopting Policies

The implementation of transportation policies is intended to achieve the objectives of the District Plan. Many of the potential effects generated from transportation also create some adverse effects. Conversely, some land use activities because of their character, scale, intensity or location may adversely affect the transportation network. These policies seek to avoid, remedy or mitigate the adverse effects of the use of

the transportation network, whilst ensuring that the network is operated in a safe and effective manner, now and into the future.

The management of the transportation network must take into account future needs and facilitate the achievement of acceptable environmental standards. The use of the transportation network impacts directly on people and on their ability to provide for health, safety and wellbeing. Some areas require special attention and their amenity should not be degraded by adverse effects. Each policy provides one component part of the overall management framework for the transportation network.
Restricting vehicle types and movements in certain parts of the City can facilitate sustainability of the road resource.

The availability of different forms of transportation modes enables people and communities to provide for their social, cultural and economic wellbeing. *[Amended by Consent Order 5/5/05]*

20.4 Methods of Implementation

In addition to the rules found both in this section and in the relevant zone provisions, the methods to be used to achieve the objectives and policies identified in this section include the following:

Method 20.4.1 Transportation Strategy

Preparation of the City's Transportation Strategy for the management of the land transportation network. This document will have a strategic focus.

Policies: 9.3.4 - 9.3.6, 20.3.1, 20.3.2, 20.3.4 - 20.3.6, 20.3.8

Method 20.4.2 Road Hierarchy

Identify the Council's hierarchical network of roads for the City, classifying roads with respect to their traffic function. The hierarchy adopted by the District Plan is not necessarily the same as that adopted for the purposes of road funding and maintenance. It is intended as a mechanism for identifying appropriate locations for access onto roads.

The hierarchy identified for the District Plan is as follows:

(a) National roads (state highways) including limited access roads.

(b) Regional roads.

(c) District roads.

(d) Collector roads.

(e) Local roads.

National and regional roads provide for the greatest level of movement with a minimum access function. They connect major localities and link with areas beyond the City. Some regional roads serve as bypasses around the City.

District roads provide connections between the regional roads and connect major rural, suburban, commercial and industrial areas.

Collector roads distribute and collect local traffic within and between neighbourhoods and link rural communities. They provide for traffic movement and property access.

The primary function of local roads is to provide access to properties, rather than to act as through-routes.

The District Plan road hierarchy is shown on District Plan Maps 73 and 74.

It is the intention of Council, during the life of the District Plan, to further develop the hierarchy to recognise surrounding land uses.

Policies: 20.3.1, 20.3.2, 20.3.4, 20.3.5

Method 20.4.3 Dunedin City Council Code of Subdivision and Development

Implement the Dunedin City Council Code of Subdivision and Development which sets technical standards to ensure that road amenity is protected, road safety issues are addressed, and provision is made for cyclists and pedestrian links and areas. *[Amended by Plan Change 12, 20/01/2012]*

Policies: 20.3.1, 20.3.4, 20.3.5, 20.3.8

Method 20.4.4 Accords and Protocols

The preparation and adoption of environmental accords and protocols with:

(i) Primary sector groups operating in rural areas, to provide adequate notice to allow road controlling authorities to plan ahead for any necessary work on the road and access, and provide for maintenance costs.

(ii) Campus Constituent Institutions for the provision of adequate car parking in the area around the Campus.

(iii) HealthCare Otago for the provision of adequate car parking associated with the hospital.

Policies: 12.3.8, 20.3.1, 20.3.4, 20.3.6

Method 20.4.5 Liaison

Liaise with:

(i) Road user groups.

(ii) Public transport operators.

(iii) The Otago Regional Council regarding the Regional Land Transport Strategy and the Regional Passenger Transport Plan.

(iv) Road controlling authorities.

Policies: 20.3.1, 20.3.4 - 20.3.6, 20.3.8

Method 20.4.6 Works Programmes

Consider the implementation of works programmes relating to:

(i) The roading network, including (but without limitation) landscaping, hard surfacing unsealed roads, hard surface improvements, footpath improvements, service lanes, bridge replacement and upgrades, kerb and channelling, intersection improvements, traffic calming and street lighting.

(ii) Parking facilities in the Central Parking Area.

(iii) Cycleways, cycle routes and cycle parking facilities.

(iv) Walkways through public open spaces and recreation areas.

(v) Infrastructure to support public transport in the City, including facilities for users.

Policies: 9.3.4 - 9.3.6, 20.3.1 - 20.3.5, 20.3.7, 20.3.8

Method 20.4.7 Traffic Management Schemes

Prepare, implement and review traffic management schemes, to control access and the speed of traffic in streets.

Policies: 9.3.6, 20.3.1, 20.3.2, 20.3.4, 20.3.8

Method 20.4.8 Consultation

Develop consultation and public participation in planning improvements to the transportation network, in accordance with any legislative requirements.

Policies: 9.3.6, 20.3.1, 20.3.4, 20.3.8

Method 20.4.9 Bylaws

Consider the implementation of bylaws for:

(i) Managing commercial activities undertaken on legal roads.

(ii) Speed and parking restrictions.

(iii) Vehicle stands (including taxi stands, service delivery vehicle stands and bus stops).

(iv) Footpath crossings.

(v) Controlling signs.

(vi) Limited access roads.

Policies: 9.3.5, 20.3.1, 20.3.3, 20.3.4, 20.3.8

Method 20.4.10 Information, Education and Public Awareness

Provide information for the purpose of:

(i) Encouraging producers, operators and road users to use efficient and effective means of transportation, and to adopt practices that increase safety and that avoid, remedy or mitigate adverse effects of the use of transport.

(ii) Encouraging the use of public transport, cycling and walking.

(iii) Promoting the development of road safety in the community.

Policies: 20.3.1, 20.3.4, 20.3.8

Principal Reasons for Adopting Methods

A range of methods is required to manage the City's transportation resources sustainably. Because of the nature of transportation networks, this range must by necessity include methods both within and outside the District Plan.

The main methods contained within the District Plan are related to regulatory regimes which manage the potential conflicts between modes of transportation, and transportation and land use activities. A key document outside the Plan will be the Transportation Strategy.

Bylaws under the Local Government Act 1974 are also regulatory methods which are related more specifically to transportation modes than are the provisions of the Resource Management Act 1991 and this District Plan. The enforcement mechanisms of bylaws may be more effective than those under the Resource Management Act 1991 and it is therefore desirable to utilise them rather than use District Plan methods. They are employed, for example, with respect to parking restrictions and to manage certain activities on roads.

It is recognised that regulation will not achieve all desired environmental outcomes, and for this reason the Council proposes the use of accords and protocols, where appropriate, to achieve maintenance of the road resource, particularly in relation to logging of forests.

Works and services identified in the Council's Annual and Strategic Plans are also means of managing its transportation network at the operational level. Other methods relate to liaison, consultation and educational measures, and are also considered appropriate to the achievement of the District Plan's objectives. In some cases a combination of methods is better suited to the implementation of policies.

20.5 Rules

Note to Plan Users:

1. *Rules 20.5.1 to 20.5.4 apply throughout all District Plan zones and are additional to the zone rules.*
2. *The relevant zone rules apply to any activity that is not listed in Rules 20.5.1 to 20.5.4 and is proposed within the legal road reserve or within an existing formed road corridor that is not contained within the legal road reserve.*
3. *The performance standards for parking, loading and access listed in Rules 20.5.5 to 20.5.7 of this section apply as specified in the zone rules.*

[Inserted by Plan Change 10, 18/1/11]

Rule 20.5.1 Permitted Activities *(Policies: 20.3.2, 20.3.3)*

The following activities are permitted activities within the legal road reserve and within existing formed road corridors that are not contained within the legal road reserve, provided that they comply with the relevant performance standards set out in Rule 20.5.2:

(i) Maintenance of existing roads, which includes realignment, traffic and parking controls, road signs, lighting and landscaping.

(ii) Street furniture.

[Amended by Plan Change 10, 18/1/11]

Rule 20.5.2 Performance Standards for Permitted Activities *(Policies: 20.3.2, 20.3.3)*

(i) Street furniture provided for under Rule 20.5.1(ii) shall comply with the following performance standards:
   - (a) The maximum height of street furniture shall be 3.5m.
   - (b) The maximum area of ground covered by the street furniture shall be $9m^2$, measured at any point above ground level.
   - (c) The maximum length of street furniture shall be 6.5m.
   - (d) The minimum unobstructed width of footpath available for pedestrian movement past street furniture shall be:
     - (i) 2.0m in the Central Activity Zone.
     - (ii) 1.2m in all other zones.

Note to Plan users:

1. *Section 339 of the Local Government Act 1974 sets out the process that the Council must follow prior to erecting any shelter for use by public transport or taxi passengers. This process includes consultation with the owners and occupiers of land whose frontage is affected by the shelter.*
2. *Approval for the design and location of street furniture must be obtained from the relevant road controlling authority. Under section 317 of the Local Government Act 1974, the Dunedin City Council is the road controlling authority for all roads in the city, with the following exceptions:*
   - *State Highways are under the control of the NZ Transport Agency (NZTA), unless the NZTA has delegated control to the Council.*
   - *Government roads are under the control of the Minister of Transport.*

   In addition, under section 51(2) of the Government Roading Powers Act 1989, the written

permission of the NZTA must be obtained prior to the commencement of any work on any State Highway.

[Inserted by Plan Change 10, 18/1/11]

Rule 20.5.3 Discretionary Activities (Restricted) *(Policies 20.3.1, 20.3.7)*

The following activities are discretionary activities (restricted):

(i) At the intersection of roads with railway lines, within the visibility envelope defined in the diagram in Appendix 20A:

(a) The erection of a building.

(b) The erection of a fence which exceeds 1.5 m high (other than post and wire fences).

(c) Vegetation which exceeds 1.5 m high.

The Council's discretion is restricted to the effects on the visibility of road and rail traffic approaching the intersection point.

(ii) Street furniture that does not comply with the performance standards listed in Rule 20.5.2. The Council's discretion is restricted to the effects on the amenity of the street and the effects on the safety and movement of pedestrians. *[Inserted by Plan Change 10, 18/1/11]*

Rule 20.5.4 Discretionary Activities (Unrestricted) *(Policy 20.3.1)*

The following activities are discretionary activities (unrestricted). In assessing an application for a discretionary activity (unrestricted), the Council shall have regard but not be limited to the matters identified in Section 20.6.12:

(i) Road construction, where the activity has not been considered as part of an approved subdivision consent.

[Amended by Plan Change 10, 18/1/11]

Rule 20.5.5 Parking Performance Standards *(Policies 20.3.1, 20.3.4)*

(i) **Calculation of on-site parking requirements**

(a) Where an assessment of the required parking standards results in a fractional space, any fraction under one half shall be disregarded, except for staff car parking where any fraction under one half shall be counted as one space. Any fraction of one half and greater shall be counted as one space.

(b) The area of any parking space or spaces provided and of vehicular access drives and aisles provided within a building shall be excluded from the assessment of gross floor area of that building for the purpose of ascertaining the total number of spaces required or permitted.

(c) When calculating the overall parking requirements for a development, the separation of areas into different activities will be required where the gross floor area of an activity (or public floor area or other such measurement that the standards for the relevant activity is based upon) exceeds 10% of the total gross floor space of the development. The total parking requirement for any development shall be the sum of the requirements for each area..

(ii) **Location and availability of parking spaces**

(a) A motor vehicle occupying any parking space shall have ready access to a road at all times without the necessity of moving a motor vehicle occupying any other parking or loading space on the site, except as provided for in Rule 20.5.5(ii)(b). *[Amended by Plan Change 10, 18/1/11]*

(b) Subject to Rule 20.5.5(vi), where two parking spaces are required for a single residential unit, they may be provided in tandem. *[Inserted by Plan Change 10, 18/1/11]*

(c) Parking spaces are to be provided on the site of the activity requiring them, except for those activities in the Harbourside Zone as specified by Rule 26.8.3(i). *[Amended by Plan Change 7, 29/5/2012]*

(iii) **Parking spaces for people with disabilities**

(a) When car parks are provided in or associated with a building which is accessible to people with disabilities, all required car parking areas shall include spaces for people with disabilities provided at the rate of 1 for up to 10 total spaces provided, 2 for up to 100 total spaces provided, plus 1 for every additional 50 spaces.

(b) The dimensions of all spaces shall comply with the appropriate dimensions in Appendix 20B.

(iv) **Queuing spaces**

Space for on-site queuing for vehicles entering or exiting car parking areas shall be provided in accordance with Table 20.1. Where the parking area has more than one access, the required queuing space may be divided proportionally between the accesses, in accordance with the proportion of traffic volume to be served by each access. For the purposes of this rule, traffic volume means the number of inward vehicle movements per access per day.

Number of Car Parking Spaces	Minimum Queuing Space Length (metres)
5-20	6
21-50	12
51-100	18
101+	24

Table 20.1: Queuing Space Lengths

Queuing space length shall be measured from the road boundary to the nearest vehicle control point or point where conflict with vehicles already on the site may arise.

[Amended by Plan Change 10, 18/1/11]

(v) **Design of parking spaces**

(a) The gradient for off-street parking surfaces for all non-residential activities shall be no more than 1 in 20 in any one direction.

(b) The surface of all parking, associated access and manoeuvring areas (except parking areas for residential activities requiring 5 or less car parking spaces) shall be formed, hard surfaced and, if impermeable surfacing is used, drained, and parking spaces permanently marked. *[Amended by Plan Change 10, 18/1/11]*

(c) All parking areas, excluding those for residential activities, which are designed to accommodate 4 or more vehicles and which are used at night shall be illuminated to a minimum maintained level of 2 lux, with high uniformity, during the hours of operation.

(d) The dimensions of all spaces shall comply with the appropriate dimensions in Appendix 20B.

(e) All parking areas shall have clearly defined access and the remainder of the property road boundary shall have a physical barrier which separates the parking area from the road. *[Inserted by Consent Order, 20/12/01]*

(vi) **On-site manoeuvring**

(a) All on-site manoeuvring areas for residential activities shall be designed to accommodate at least an 85 percentile design motor vehicle, as shown in Appendix 20C, unless otherwise specified. This manoeuvring area shall be provided without the need for a turntable. *[Inserted by Plan Change 10, 18/1/11]*

(b) All on-site manoeuvring areas for non-residential activities shall be designed to accommodate at least a 99 percentile design motor vehicle, as shown in Appendix 20C, unless otherwise specified. This manoeuvring area shall be provided without the need for a turntable. *[Amended by Plan Change 10, 18/1/11]*

(c) On-site manoeuvring shall be provided to ensure that no vehicle is required to reverse either onto or off a national, regional, district or collector road, identified on District Plan Maps 73 and 74.

(d) For residential activities, on-site manoeuvring for an 85 percentile motor vehicle shall be provided to ensure that no 85 percentile motor vehicle is required to reverse onto or off a site where:

(i) 5 or more parking spaces share a common access;

(ii) 5 or more residential units share a common access; or

(iii) The activity is on a rear site.

[Amended by Plan Change 10, 18/1/11]

(e) For non-residential activities, on-site manoeuvring for a 99 percentile motor vehicle shall be provided to ensure that no 99 percentile motor vehicle is required to reverse onto or off a site where:

(i) 5 or more parking spaces share a common access; or

(ii) The activity is on a rear site.

[Inserted by Plan Change 10, 18/1/11]

(f) Vehicles shall not be required to undertake more than one reverse manoeuvre when manoeuvring into or out of any required parking space.

(g) Required on-site manoeuvring space may include any right of way that the site to which the manoeuvring requirements apply is legally entitled to use. *[Inserted by Plan Change 10, 18/1/11]*

Rule 20.5.6 Vehicle Loading Performance Standards *(Policies 20.3.1, 20.3.4)*

(i) **Design of loading areas**

(a) On-site manoeuvring shall be provided to ensure that no vehicle is required to reverse either onto or off a national, regional, district or collector road identified on District Plan Maps 73 and 74.

(b) In the Port Zones, any loading areas shall be designed and located without the necessity for any vehicles to reverse from or onto any road.

(c) Vehicles shall not be required to undertake more than one reverse manoeuvre when manoeuvring out of any required loading space.

(d) Each loading space shall have unobstructed vehicular access to a road or service lane.

(e) The receipt and dispatch of goods and the removal of rubbish is to be provided for in such a way that will not conflict with car parking arrangements or with pedestrian movements.

(f) Parking spaces and loading spaces may be serviced in whole or in part by a common manoeuvring area which shall remain unobstructed.

(g) Loading areas shall not be accessed from 'Identified Pedestrian Frontages'.

(h) The gradient for all loading areas shall be no more than 1 in 20 in any one direction.

(i) All loading areas, associated access and manoeuvring areas which are used at night shall be illuminated to a minimum maintained level of 2 lux, with high uniformity, during the hours of operation.

(j) The surface of all loading areas, associated access and manoeuvring areas shall be formed, hard surfaced and, if impermeable surfacing is used, drained, and loading areas permanently marked. *[Amended by Plan Change 10, 18/1/11]*

(ii) For activities, except Residential Activities, that involve construction of a new building on a site which fronts a State Highway, loading and access shall comply with the performance standards in Rules 20.5.6(i) and 20.5.7 and loading spaces shall be provided as follows:

(a) Activities with building gross floor area 50 m^2 or less.

Loading shall be provided for on the following basis:

Minimum Size: 6 m long x 3.5 m wide x 2.6 m high.

Manoeuvre Area: To accommodate a 99 percentile design motor vehicle as shown in Appendix 20C. *[Amended by Plan Change 10, 18/1/11]*

(b) Activities with building gross floor area greater than 50 m^2 but less than 2,500 m^2.

Loading shall be provided for on the following basis:

Minimum Size: 8 m long x 3.5 m wide x 3.8 m high.

Manoeuvre Area: To accommodate an 8 metre rigid truck as shown in Appendix 20D.

(c) Activities with building gross floor area 2,500 m^2 or greater.

Loading shall be provided for on the following basis:

Minimum Size: 20 m long x 3.5 m wide x 4.4 m high.

Manoeuvre Area: To accommodate a B Train truck as shown in Appendix 20E.

[Inserted by Consent Order 20/12/01]

Rule 20.5.7 Vehicle Access Performance Standards *(Policies 20.3.1, 20.3.4, 20.3.5, 20.3.8)*

Note to Plan Users:

1. These performance standards do not apply to vehicle tracks on farms. *[Amended by Plan Change 10, 18/1/11]*

2. Approval for any work in a road, including the establishment of access to properties, must be obtained from the relevant road controlling authority. Under section 317 of the Local Government Act 1974, the Dunedin City Council is the road controlling authority for all roads in the city, with the following exceptions:
   - State Highways are under the control of the NZ Transport Agency (NZTA), unless the NZTA has delegated control to the council.
   - Government roads are under the control of the Minister of Transport.

   In addition, under section 51(2) of the Government Roading Powers Act 1989, the written permission of the NZTA must be obtained prior to the commencement of any work on any State Highway. Early consultation with the NZTA should be undertaken for subdivision or development proposals adjacent to, or seeking access to, State Highways.

Where the State Highway is declared a "Limited Access Road" approval from the NZTA is required for new accesses or changes to existing accesses. The objective of this control is to protect and maintain the safety and high level of traffic services on these routes which may otherwise be adversely affected by traffic generation of property alongside. Approval, under the provisions of the Government Roading Powers Act 1989, is required for new accesses for subdivision purposes, and changes to existing accesses, and may be required for other development of land adjacent to Limited Access Roads. The NZTA should be consulted initially with respect to development along Limited Access Roads. The location of Limited Access Roads is shown in Planning Map 73. *[Inserted by Consent Order 20/12/01 and amended by Plan Change 10, 18/1/11]*

(i) **Maximum number of vehicle crossings** *[Amended by Plan Change 10, 18/1/11]*

The maximum number of vehicle crossings permitted on each road frontage of any site shall be in accordance with Table 20.2.

Frontage Length (m)	Local Road	Collector Road	National (less than 100km/h), Regional or District Road	National Road (100km/h)
0 - 18	1	1	1	1
18 - 60	2	1	1	1
60 - 100	3	2	1	1
100 - 200	3	3	2	1
200 or greater	3	3	2	2

Table 20.2: Maximum number of vehicle crossings per road frontage *[Amended by Consent Order, 20/12/01]*

(ii) **Minimum sight distances from vehicle crossings (applies only to State Highways)**

[Amended by Consent Order, 15/1/2003, Plan Change 3, 1/9/2008 and Plan Change 10, 18/1/11]

The minimum sight distance from any vehicle crossing in the Airport Zone, Rural Residential or Rural Zone or at the Southwest Sawyers Bay portion of the Industrial 1 Zone, shall be in accordance with Table 20.3.

The sight distances shown in Table 20.3 shall be measured from the points shown on the diagram in Appendix 20F.

Speed (km/h)	Sight Distance (m)
50	115
60	140
70	170
80	205
90	240
100	285

Table 20.3: Minimum sight distances from vehicle accesses

(iii) **Distances of vehicle crossings from intersections** *[Amended by Plan Change 10, 18/1/11]*

Any part of any vehicle crossing shall not be located closer to the intersection of any roads than the distances specified in Table 20.4.

Roads where the speed limit is less than 100 km per hour					
Frontage Road	**Intersecting road type (distance in metres)**				
	National	Regional	District	Collector	Local
National	70	70	70	55	35
Regional	70	70	70	55	36
District	70	70	70	55	35
Collector	40	40	40	40	20
Local	25	25	25	25	20
Roads where the speed limit is 100 km per hour					
Frontage Road	**Intersecting road type (distance in metres)**				
	National	Regional	District	Collector	Local
National	275	275	180	180	180
Regional	180	180	180	180	90
District	180	180	180	90	90
Collector	90	90	90	60	60
Local	90	90	90	60	60

Table 20.4: Minimum distances of vehicle crossings from intersections

Clarification of, and exemptions to, Table 20.4

(a) Distances shall be measured as shown in Appendix 20J. *[Amended by Plan Change 10, 18/1/11]*

(b) The only exemption to this standard shall be for proposals not involving application for subdivision consent, where the minimum distances set out in Table 20.4 do not allow any vehicle crossing to be established on any road frontage of a site, due to the configuration of its boundaries. In these cases, a single vehicle crossing may be constructed in the position that most nearly complies with the provisions of Table 20.4. This exemption shall apply only at sites where no vehicle crossing whatsoever would otherwise be permitted, and shall apply to one vehicle crossing only at such sites. This exemption shall not apply to vehicle crossings serving multiple units. *[Amended by Plan Change 10, 18/1/11]*

(c) For proposals involving applications for subdivision consent, where the minimum distances set out in Table 20.4 do not allow any vehicle crossing to be established on any road frontage of a site, due to the configuration of its boundaries, this shall be a matter that Council retains discretion over. *[Amended by Plan Change 10, 18/1/11]*

(d) National, regional, district and collector roads are identified on District Plan Maps 73 and 74. Local roads are all other roads.

(iv) **Vehicle access standards**

(a) For State Highways in Rural and Rural Residential zones the vehicle access shall not serve more than 100 equivalent car movements per day (ecm per day). Vehicle access design shall be in accordance with Table 20.5. For the Southwest Sawyers Bay portion of the Industrial 1 zone the only vehicle access shall be from State Highway 88 and shall comply with the relevant diagram in Appendix 20I. Equivalent car movement (averaged over one week) is calculated as follows: one car moving to and from a property equals 2

ecm; one truck moving to and from a property equals 6 ecm; and one truck and trailer moving to and from a property equals 10 ecm. *[Inserted by Consent Order 20/12/01 and amended by Consent Order 15/1/03 and Plan Change 10, 18/1/11]*

Type of traffic using vehicle access	Volume of traffic using vehicle access (ecm per day)	Volume of traffic using State Highway (volume per day)	Vehicle access design
≤1 movement per day of a vehicle weighing over 3.5 tonnes	1-30	<10,000	See Appendix 20G
		≥10,000	See Appendix 20H
	31-100	<10,000	See Appendix 20H
		≥10,000	See Appendix 20I
>1 movement per day of a vehicle weighing over 3.5 tonnes	1-30	All	See Appendix 20H
	31-100	All	See Appendix 20I

Table 20.5: Vehicle accesses onto State Highways in the Rural and Rural Residential Zones

[Table inserted by Plan Change 10, 18/1/11]

(b) In all cases where a site adjoins a legal road that is constructed of hard surfaced footpath or carriageway, the vehicle access shall be hard surfaced from the edge of the existing hard surfacing on the footpath or carriageway to the property boundary and for a minimum of 5m inside that boundary. The purpose of this performance standard is to prevent gravel or loose material from being carried onto the footpath or carriageway, and also to prevent damage to the edge of the existing footpath or carriageway and to the newly established vehicle crossing itself. For the purposes of this standard, laneways shall not be an acceptable form of hard surfacing. *[Amended by Plan Change 10, 18/1/11]*

(c) In all zones other than Rural and Rural Residential, the full length of any private way that serves 2 or more units shall be hard surfaced. *[Amended by Plan Change 10, 18/1/11]*

(d) For proposals in the Rural or Rural Residential Zones, the vehicle accesses shall contain clear sight triangles, being triangles either side of the access, each triangle having as one side the 10 m length of the access centre line and another side being 10 m along the road boundary measured from the centre line of the access. The clear sight triangle shall be on the road side of any gate and visibility shall not be obstructed by fences, structures, vegetation or any barrier above a height of 800 mm. *[Amended by Plan Change 10, 18/1/11]*

(e) Vehicle access shall be designed to minimise longitudinal gradients; and the maximum change in gradient without transition for all vehicular access shall be no greater than 1 in 8 for summit grade changes or 1 in 6.7 for sag grade changes. *[Source: Maximum grade changes without transition are reproduced from AS/NZS 2890.1:2004 under Copyright Licence 000753] [Amended by Plan Change 10, 18/1/11]*

(f) Except as specified in Rule 20.5.7(iv)(i), there shall be a minimum distance of one metre (as shown in Figure 20.1, p20:22) between a residential unit and a formed vehicle access where:

- The residential unit and the vehicle access are within the same site, and
- The vehicle access serves one or more other residential unit(s).

As shown in Figure 20.2, p20:22, where an existing formed vehicle access does not comply with the minimum required formed width specified in Table 20.7 of Rule 20.5.7(v)(b), a new residential unit shall be positioned to provide:

- The minimum one metre distance required by this rule, and
- Sufficient space to increase the formed width of the access to comply with Table 20.7.

[Inserted by Plan Change 10, 18/1/11]

(g) Except as specified in Rule 20.5.7(iv)(i), private ways may provide vehicle access to a maximum of 12 residential units.

[Inserted by Plan Change 10, 18/1/11]

(h) Except as specified in Rule 20.5.7(iv)(i), where vehicle accesses slope downhill towards the carriageway or footpath, the maximum grade for the 5m of the access immediately abutting the carriageway or the back of the footpath shall be no greater than 1 in 8.

[Inserted by Plan Change 10, 18/1/11]

(i) Rules 20.5.7(iv)(f), (g) and (h) shall not apply to activities that were lawfully established prior to 29 September 2010, unless a change to the activity increases the degree to which the activity does not comply with the relevant standard. For the avoidance of doubt, a change to an activity shall only be considered to increase non-compliance with Rules 20.5.7(iv)(f), (g) and (h) in the following circumstances:

- Rule 20.5.7(iv)(f): reduction in the distance between a residential unit and a formed vehicle access, where the existing distance is less than 1m.
- Rule 20.5.7(iv)(g): increase in the number of residential units served by an existing private way, where that private way serves 12 or more residential units.
- Rule 20.5.7(iv)(h): increase in the gradient of an existing vehicle access that slopes downhill towards a carriageway or footpath, where the gradient of that access exceeds 1 in 8.

Note that lawfully established activities include those for which resource consent has been granted based on previously operative District Plan rules, as well as those lawfully established prior to the operation of any District Plan rule.

[Inserted by Plan Change 10, 18/1/11]

Figure 20.1 Minimum separation distance between residential unit and vehicle access

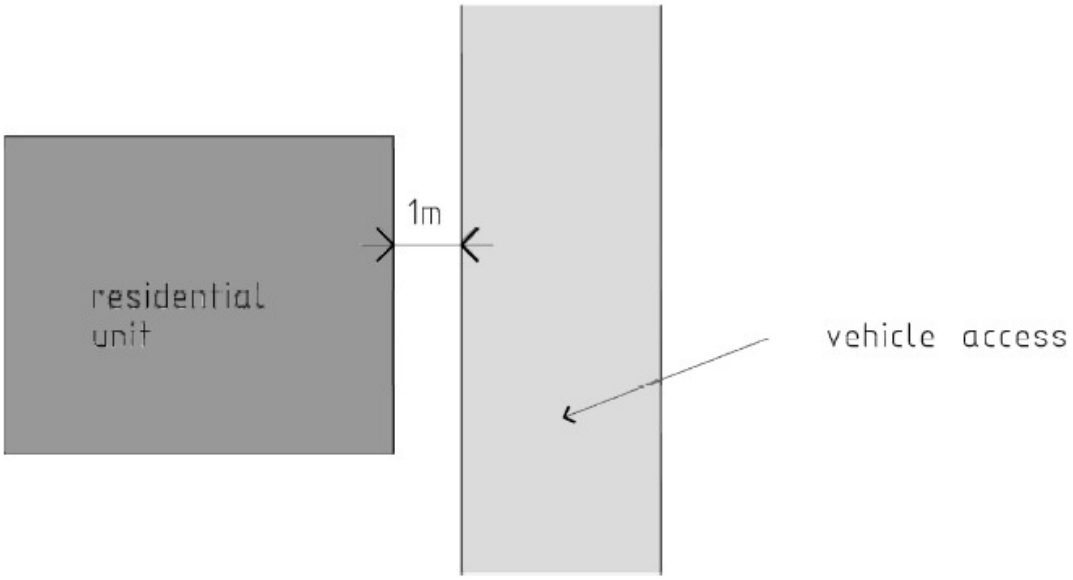
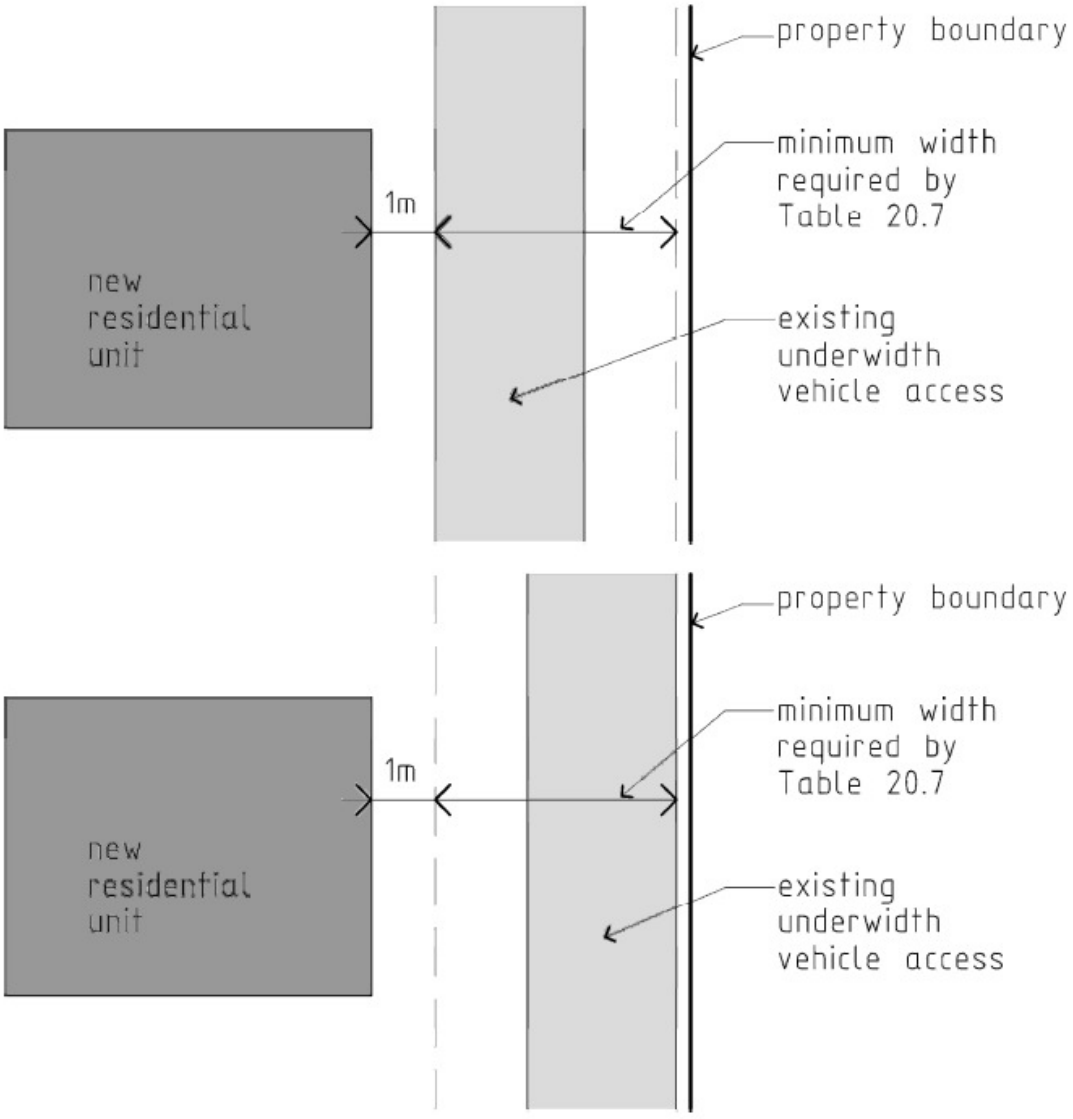


Figure 20.2 Minimum separation distance between new residential unit and existing under-width vehicle access: possible scenarios



(v) **Dimension requirements for vehicle access on a site**

(a) For all sites except those specified in Rules 8.9.2(ix)(c) and 9.8.2(viii)(a)(i) in Sections 8: Residential and 9: Activity, the maximum width of each vehicle crossing shall be in accordance with the standards set out in Table 20.6:

Land Use	Maximum width (m)
Residential Activities	6.0
Other Activities	9.0

Table 20.6: Maximum width standards for vehicle crossings

The width of a vehicle crossing shall be measured at the kerb or, in the absence of a kerb, at the edge of the carriageway. Where a vehicle crossing incorporates a dropped kerb, its width shall be measured as the width of the fully dropped kerb.

[Inserted by Plan Change 10, 18/1/11]

(b) The minimum widths of all private ways and vehicular access on a site shall be in accordance with the standards set out in Table 20.7. For proposals involving applications for subdivision consent, the minimum legal width will be determined on the basis of the maximum number of units permitted under the relevant District Plan zone rules for that site.

Land Use	Number of Units Served	Minimum Legal Width (m)	Minimum Formed Width (m)
Urban Areas			
Residential Activities	1-3 4-6 7-12	3.5 6.0 6.0	3.0 4.5 5.0
Other Activities	A11	6.0	5.0
Rural Areas			
Residential Activities	1-3 4-12	4.0 6.0	3.5 5.0
Other Activities	A11	6.0	5.0

Table 20.7: Minimum width standards for private ways and vehicular access

[Amended by Plan Change 10, 18/1/11]

Note to Plan users:
All vehicle accesses must comply with the fire safety requirements of the New Zealand Building Code. See Acceptable Solution C/AS1 Part 8: Fire Fighting of New Zealand Building Code Compliance Document C Fire Safety, which sets out vehicle access dimensions and design to allow access for fire fighting. Under this Acceptable Solution, a minimum access width of 4m is required to within 18m of at least one side of each building, except that when a building is sprinklered and has a fire riser main installed, access need only be to within 18m of the inlets to these systems. There are additional requirements for buildings containing 'SC and SD purpose groups' as defined in the Compliance Document; examples of such buildings include hospitals, care institutions and prisons.

[Inserted by Plan Change 10, 18/1/11]

20.6 Assessment of Resource Consent Applications

In assessing any application, in addition to the matters contained within the Fourth Schedule of the Resource Management Act 1991, the Council will have regard to, but not be restricted by the following matters:

20.6.1 Parking and Loading Provision

(a) Whether it is physically practicable to provide the required parking or loading spaces on the site in terms of the existing location of buildings, access to the road, topography and utility location.

(b) Whether there is an adequate alternative supply of parking or loading spaces in the vicinity.

(c) Whether there is another site in the immediate vicinity that:

  (i) Has available parking or loading spaces which are not required at the same time as the proposed activity.

  (ii) Has a legal agreement bonding the loading or parking to the activity.

  (iii) Is clearly associated with the activity through signage or other means.

  (iv) Does not require pedestrian movements across national or regional roads.

  (v) Is surrounded by compatible land use activities.

(d) Whether a demonstrably less than normal incidence of parking or loading will be generated by the proposal, such as due to specific business practice, type of customer, public transportation.

(e) Whether a significant adverse effect on the character and amenity of the surrounding area, particularly pedestrian amenity and safety, will occur as a result of providing or not providing the parking or loading space to the required standard.

(f) The extent to which the safety and efficiency of the surrounding roading network would be adversely affected by parked and manoeuvring vehicles on the roads.

(g) Any cumulative effect of the lack of on-site parking and loading spaces in conjunction with other activities in the vicinity not providing the required number of parking or loading spaces.

(h) How the car park is separated from the street frontage, particularly where that street frontage is an 'Identified Pedestrian Frontage'.

(i) In situations where angle parking is provided on a collector road, whether it may be appropriate to allow reversing from the site onto that road. *[Inserted by Consent Order: 1/6/04]*

(j) Whether meeting parking requirements would result in a net reduction in the availability of parking in the vicinity of the site. This assessment matter will be relevant in cases where the creation of access to on-site car park(s) would result in the loss of on-street car park(s). *[Inserted by Plan Change 10, 18/1/11]*

(k) Whether it may be acceptable to allow loading to take place within on-site car parking areas, in cases where it may be possible to manage loading and parking within the same space in a satisfactory manner. *[Inserted by Plan Change 10, 18/1/11]*

(l) Within the Harbourside Zone, whether it is appropriate to require, or an applicant may propose, that some or all of the on-site parking spaces, are to be provided by way of a financial contribution in lieu thereof. Any financial contribution shall be determined, paid and used in accordance with the provisions of Harbourside Zone – General Rule 26.8.12. *[Inserted by Plan Change 7, 29/5/2012]*

20.6.2 Queuing Spaces

(a) Whether there would be any adverse effects on the safety or function of the frontage road.

(b) The effect of queuing vehicles on the safety of pedestrians.

(c) The extent to which the safe circulation of vehicles on the site will be affected.

20.6.3 Gradient and Surface of Parking and Loading Areas

(a) Whether any parking spaces for people with disabilities are affected.

(b) The total number of spaces affected by non-compliance or the extent of non-compliance.

(c) Whether drainage facilities are adequately designed.

(d) The effect on other sites in the area in terms of noise and dust nuisance.

(e) Whether mud, stone, gravel or other material will be carried onto public roads or footpaths.

(f) The number and type of vehicles using the area.

(g) The type of surfacing.

20.6.4 Illumination of Parking and Loading Areas

(a) The extent to which the facility is used during the hours of darkness.

(b) Whether other light sources in the area give adequate light to provide security or visibility for users of the area and its surrounds.

(c) Whether glare from the light source will adversely affect the safety and amenity of surrounding areas.

(d) The effect on the general amenity of having an unlit parking and loading area.

20.6.5 On-Site Manoeuvring

(a) Whether there would be any adverse effects on the safety or function of the frontage road.

(b) The extent to which reversing vehicles will affect the safety of pedestrians and parking spaces available, both on and off the site.

(c) Whether the peak hours of traffic generation coincide with the peak flows and vehicle queues on the frontage road(s).

(d) The number and type of vehicles using the parking, loading, manoeuvring or access area.

(e) Whether the required manoeuvring area can physically be accommodated on the site.

(f) The speed and volume of traffic on the frontage road. *[Inserted by Plan Change 10, 18/1/11]*

(g) The extent to which drivers of reversing vehicles can both see and be seen by users of the frontage road (including pedestrians, cyclists and drivers). *[Inserted by Plan Change 10, 18/1/11]*

(h) The potential for vegetation or fencing to be altered to increase the visibility of, and/or visibility from, reversing vehicles. *[Inserted by Plan Change 10, 18/1/11]*

20.6.6 Landscaping of Car Parking Areas

(a) The extent of non-compliance.

(b) The effect of any reduced landscaping, in terms of the scale and appearance of the car parking.

(c) The extent to which the site is visible from adjoining sites, particularly those in the Residential Zones.

(d) The nature of the activity which requires car parking.

(e) The relative importance of landscaping on the particular site concerned, taking into account the visual quality of the surrounding environment, particularly where a low standard of visual amenity exists and improvement is necessary.

(f) The extent that landscaping would impede visibility of motorists leaving a site to the frontage road or impede an adjacent footpath.

20.6.7 Maximum Number of Vehicle Crossings

(a) The extent to which extra vehicle crossing(s) will adversely affect the safety and efficiency of the road.

(b) Any cumulative effects of the introduction of extra vehicle crossing points in conjunction with access for other activities in the vicinity.

(c) Whether the physical form of the road will minimise the adverse effects of the extra vehicle crossing, for example the presence of a solid median to stop right hand turns.

[Amended by Plan Change 10, 18/1/11]

20.6.8 Access Design and Maximum Gradient for Vehicle Access on a Site

(a) Whether the vehicle access serves more than one site and the extent to which other users may be adversely affected. *[Amended by Plan Change 10, 18/1/11]*

(b) The extent of any adverse effects on the safety or function of either the frontage road or the vehicle access itself. *[Amended by Plan Change 10, 18/1/11]*

(c) The effect on the safety of vehicles and pedestrians on and off-site.

(d) Whether drainage facilities are adequately designed.

(e) Whether mud, stone, gravel or other material will be carried onto public roads or footpaths.

(f) The number and type of vehicles using the area.

(g) The distance between the property boundary and the edge of hard surfacing on the adjacent public road or footpath. *[Inserted by Plan Change 10, 18/1/11]*

(h) The environmental impacts of extensive areas of impermeable hard surfacing. *[Inserted by Plan Change 10, 18/1/11]*

20.6.9 Minimum Distances of Vehicle Crossings from Intersections

(a) The extent to which any extra conflict may be created by vehicles queuing across the vehicle crossing; confusion between vehicles turning at the vehicle crossing or the intersection; and the need for drivers to assimilate information about the activity on the site. *[Amended by Plan Change 10, 18/1/11]*

(b) The present or planned traffic controls at the intersection.

(c) Matters identified in 20.6.11.

20.6.10 Minimum Sight Distances from Vehicle Crossings

(a) The extent to which traffic generated by the activity will adversely affect the frontage road, particularly at times of peak traffic flows on the road.

(b) Whether the speed and volume of vehicles on the road will mitigate or exacerbate the adverse effects of the vehicle crossing on the safety and efficiency of the frontage road. *[Amended by Plan Change 10, 18/1/11]*

(c) Whether the geometry of the road will mitigate the adverse effects of the vehicle crossing. *[Amended by Plan Change 10, 18/1/11]*

(d) The extent that the addition of acceleration, deceleration or solid medians will mitigate the adverse effects of the vehicle crossing. *[Amended by Plan Change 10, 18/1/11]*

(e) The number and type of vehicles using the vehicle crossing. *[Amended by Plan Change 10, 18/1/11]*

20.6.11 Access for High Traffic Generating Activities

(a) The actual or potential level of vehicle, cycle and pedestrian traffic likely to be generated from, and moving past, the proposed vehicle crossing point(s). *[Amended by Plan Change 10, 18/1/11]*

(b) The extent to which the traffic using the vehicle crossing will adversely affect the traffic function and/or the safety of the surrounding road network. *[Amended by Plan Change 10, 18/1/11]*

(c) Whether the present and projected vehicle, cycle and pedestrian flows along the frontage road will exacerbate any adverse effects created by extra on-street parking and manoeuvring associated with the site.

(d) The ability to gain access to an alternative road which has a lesser traffic function and the environmental impacts on that alternative road in respect of residential amenities where relevant.

(e) The extent to which the noise, vibration and fumes of vehicles using the vehicle crossing would affect surrounding activities, particularly residences. *[Amended by Plan Change 10, 18/1/11]*

(f) The adverse effects of extra traffic, particularly heavy vehicles, generated by the development on the amenity and safety of surrounding residential streets.

(g) The extent to which the physical form of the frontage road may mitigate the adverse effects of the extra vehicle movements generated for example, by the presence of a solid median to stop right hand turns.

(h) Any cumulative effects of traffic generation from the activity in conjunction with traffic generation from other activities in the vicinity.

(i) Whether the speed of vehicles travelling on the frontage road is likely to exacerbate the adverse effects of the vehicle crossing on the safety of road users. *[Amended by Plan Change 10, 18/1/11]*

(j) The proximity of the vehicle crossing to other high traffic generating land use vehicle crossing points. *[Amended by Plan Change 10, 18/1/11]*

(k) The extent to which any extra conflict may be created by vehicles queuing on the frontage road past the vehicle crossing. *[Amended by Plan Change 10, 18/1/11]*

(l) The extent to which the traffic generated by the site will adversely affect the frontage road, particularly at times of peak traffic flows on the road.

(m) Whether the adverse effects of the traffic could be minimised/mitigated by on-street traffic management measures, including the installation of signals or pedestrian refuges.

(n) Whether the frontage road forms part of the state highway network.

(o) Whether the sight distances at the vehicle crossing are adequate to provide safe access/egress. *[Amended by Plan Change 10, 18/1/11]*

(p) Whether the existing road width is adequate to allow vehicles to pass slowing or turning vehicles safely or could be enhanced by acceleration and deceleration lanes.

20.6.12 Road Construction

(a) The extent of any positive or adverse effects on the amenity of the surrounding area with regard to, for example, connectivity, noise, vibration, glare and fumes.

(b) The extent of any positive or adverse effects on the traffic function and/or the safety of the surrounding road network.

(c) The extent of any positive or adverse effects on water bodies, ecosystems, and drainage patterns.

(d) The extent to which the road will provide for the needs of all road users, including vehicle traffic, cycles and pedestrians.

[Inserted by Plan Change 10, 18/1/11]

20.7 Anticipated Environmental Results

The anticipated environmental results are:

20.7.1

More safe, efficient and effective use of the roading resource and its interaction with other modes of transport.

20.7.2

Appropriate location of activities which generate a high number of traffic movements or have special traffic needs.

20.7.3

Improved and safe access for activities, especially in the rural environment and to state highways.

20.7.4

Avoid, remedy or mitigate the adverse effects of all forms of transportation, particularly road transport.

20.7.5

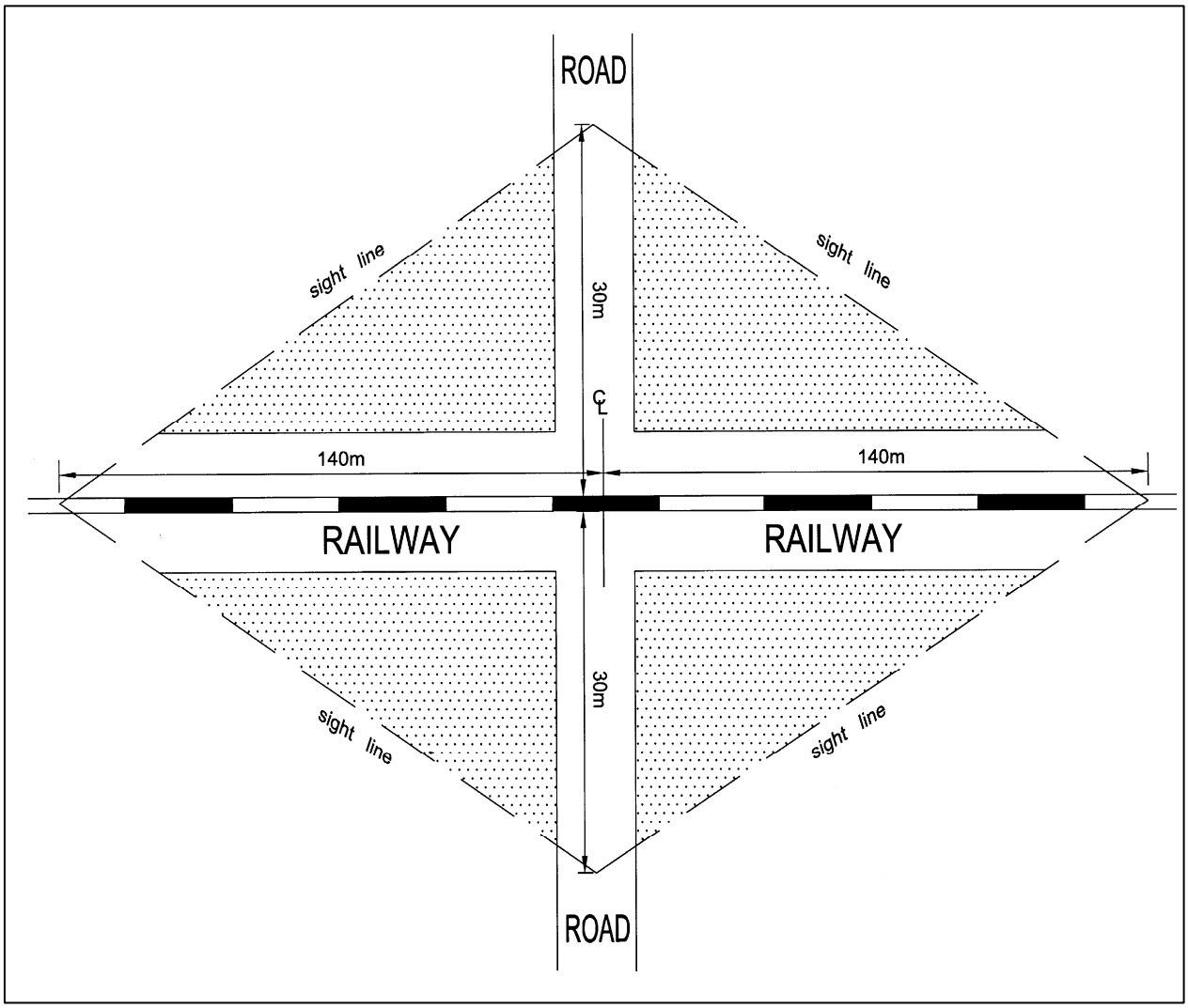
Minimising conflict between the needs of vehicular traffic and pedestrian mobility.

20.7.6

Appropriate provision for car parking to avoid off-site effects on the environment.

Appendix 20A

Railway Level Crossing Sight Line Restrictions



Appendix 20B *[Amended by Plan Change 10, 18/1/11]*

Minimum Car Parking Space Dimensions

Residential Activities (to allow for 85 Percentile Design Motor Vehicle):

Table A.1 Minimum car parking space dimensions

Type of User	Parking Angle	Stall Width (metres)	Aisle Width (metres)	Stall Depth (metres)	Stall Depth with End Overhang (metres) – see (i) below
All	90°	2.5	6.2	5.0	4.4
All	60°	2.5	5.0	5.3	4.8
All	45°	2.5	4.0	4.9	4.5
All	30°	2.5	3.1	4.2	3.9
All	0° (Parallel)	2.3	See Table A.2	6.0	6.0
People with disabilities	90°	3.6	6.2	5.0	4.4

Table A.2 Minimum aisle widths for parallel parking (metres)

	One way aisle	Two way aisle
Parallel parking on one side	3.3	6.3
Parallel parking on both sides	6.6	6.6

All Other Activities (to allow for 99 Percentile Design Motor Vehicle):

Table A.3 Minimum car parking space dimensions

Type of User	Parking Angle	Stall Width (metres)	Aisle Width (metres)	Stall Depth (metres)	Stall Depth with End Overhang (metres) – see (i) below
All	90°	2.5	6.0	5.2	4.6
All	60°	2.5	4.8	5.5	5.0
All	45°	2.5	3.8	5.1	4.7
All	30°	2.5	3.0	4.3	4.0
All	0° (Parallel)	2.3	See Table A.4	6.0	6.0
People with disabilities	90°	3.6	6.0	5.2	4.6

Table A.4 Minimum aisle widths for parallel parking (metres)

	One way aisle	Two way aisle
Parallel parking on one side	3.3	6.3
Parallel parking on both sides	6.6	6.6

Clarifications and additions to Tables A.1 to A.4:

(i) End overhang

Stall depth may be reduced to the measurement indicated in the 'Stall Depth with End Overhang' column in the following circumstances:

a) It is possible for a vehicle to overhang the end of a space by 600mm – for example where the space abuts a lawn, a paved/surfaced area or a kerb or nib wall no more than 150mm in height; and

b) The 600mm overhang area is part of the site to which the car parking requirements apply and is not required as an access way for vehicles, cyclists or pedestrians or as an amenity open space area.

(ii) Angle parking aisles

Parking angles used in off-street parking shall be as follows:

a) Parking aisles for 90° parking shall be designed for two-way movement even though one-way movement may need to be imposed in some instances.

b) Parking aisles for 30°, 45° and 60° parking shall be one-way, except where parallel parking is allowed on one side.

(iii) Parallel parking on one side, angle parking on the other

For angle parking of 30°, 45° and 60° on one side, with parallel parking on the other, minimum aisle width shall be 6.3m.

(iv) Parking spaces and aisles bounded by permanent obstructions

A permanent obstruction means any structure higher than 150mm, such as a wall, fence or column.

a) Minimum stall widths shall be increased by 300 mm where there is a permanent obstruction on one side of the parking space and by 600mm where there is a permanent obstruction on both sides of the parking space.

b) Where the aisle is bounded on one side by a permanent obstruction, the minimum aisle width shall be increased by at least 300mm.

c) Parallel parking spaces shall be located at least 300mm clear of permanent obstructions.

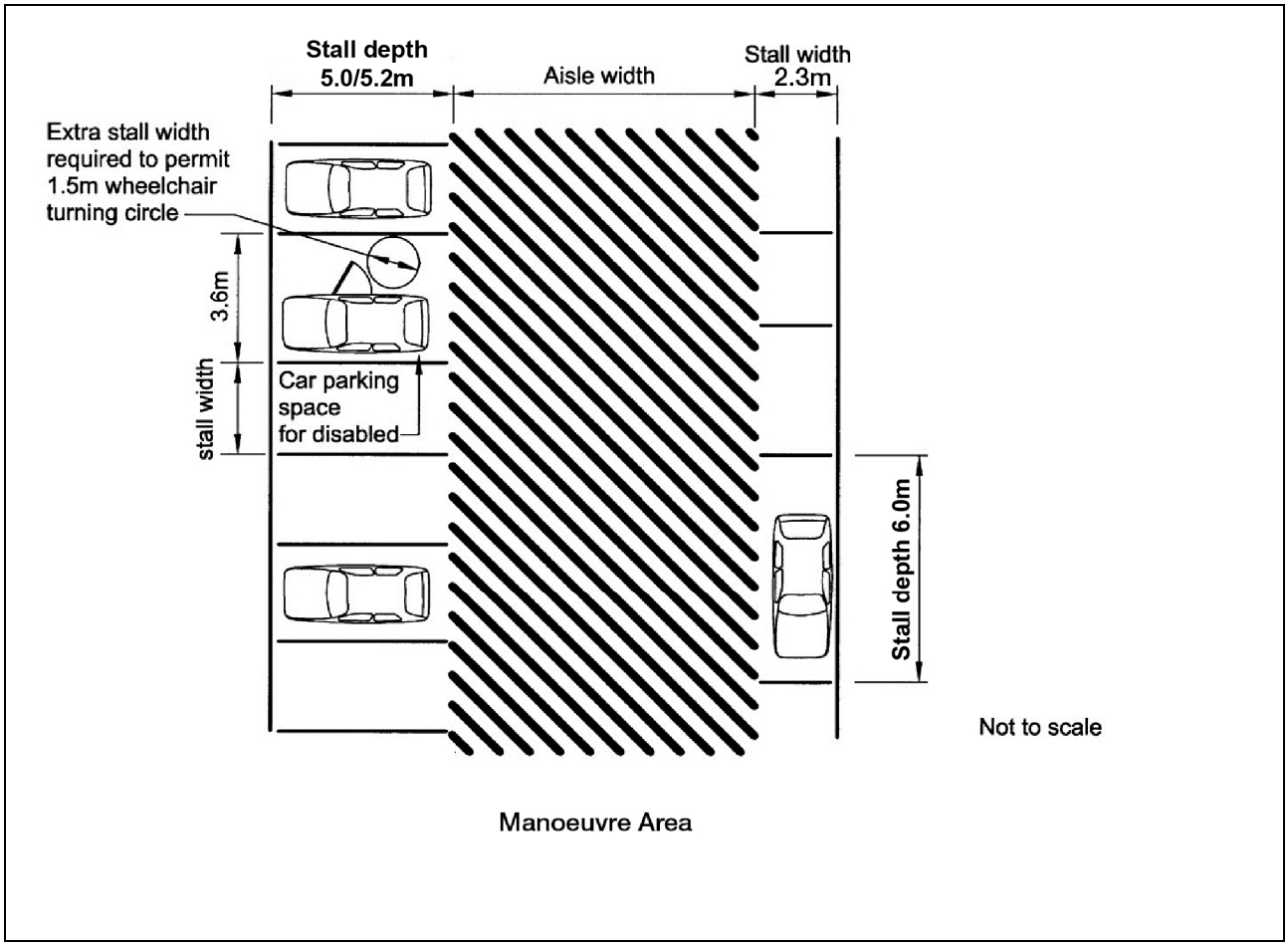
d) For parallel parking spaces, the minimum stall depth shall be increased by 300mm if one end of the parking space is obstructed or by 600mm if both ends are obstructed.

(v) Blind aisles

a) At blind aisles (i.e. parking aisles that are closed at one end), the aisle shall be extended at least 1m beyond the last parking space and the last parking space shall be widened by at least 300mm if it is bounded by a wall or fence.

b) Blind aisles shall be designed so that it is possible for cars to turn around at the closed end of the aisle and drive out forwards.

On-site car parking dimensions are further illustrated below.



Source acknowledgements:
Tables A.1 to A.4

- *Dimensions for car parking spaces for people with disabilities have been reproduced from AS/NZS 2890.6:2009 with the permission of Standards New Zealand under Copyright Licence 000753. Some modifications have been applied.*
- *Dimensions for all other car parking spaces have been calculated in accordance with Clause 2.4 of AS/NZS 2890.1:2004 with the permission of Standards New Zealand under Copyright Licence 000753.*

Clarifications and additions to Tables A.1 to A.4

- *These clarifications and additions have been reproduced from AS/NZS 2890.1:2004 with the permission of Standards New Zealand under Copyright Licence 000753. Some modifications have been applied.*

Appendix 20C *[Amended by Plan Change 10, 18/1/11]*

Base Vehicle Dimensions and Swept Paths

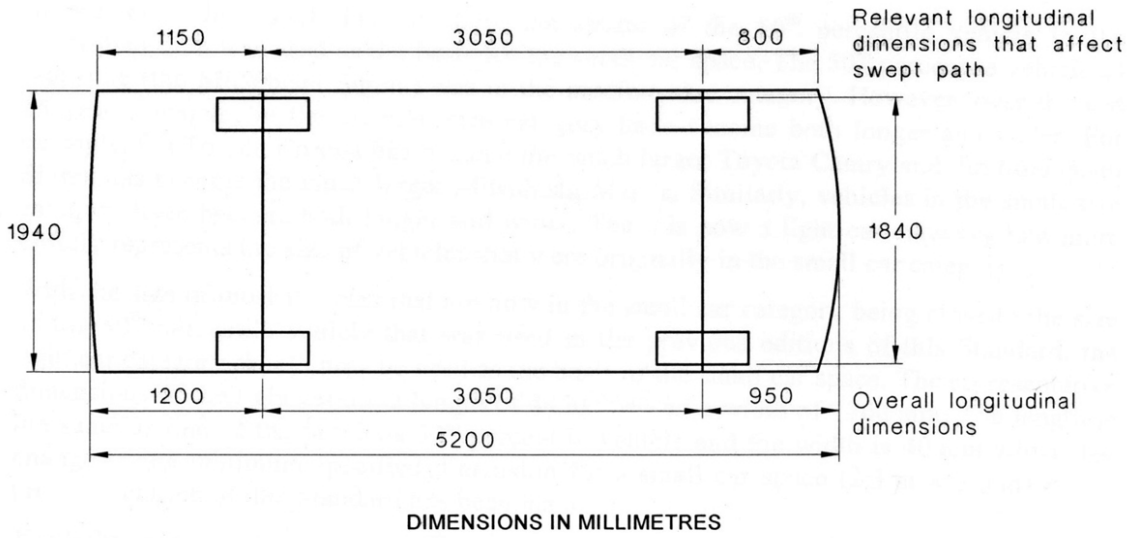


Figure A.1: 99 percentile design motor vehicle dimensions

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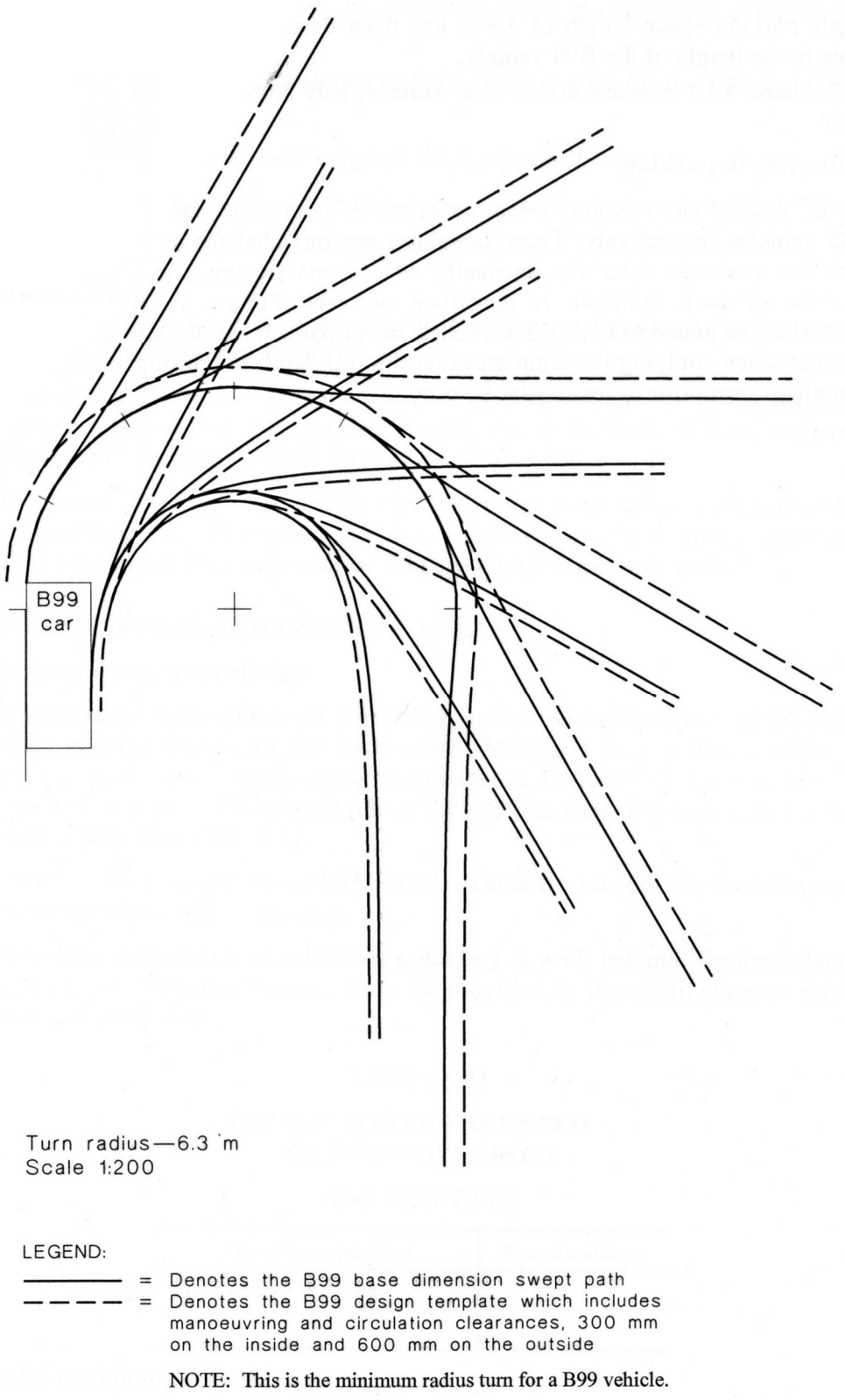

Figure A.2: 99 percentile design motor vehicle 6.3m radius turn

Reproduced from AS/NZS 2890.1:2004 with the permission of Standards New Zealand under Licence 000753.

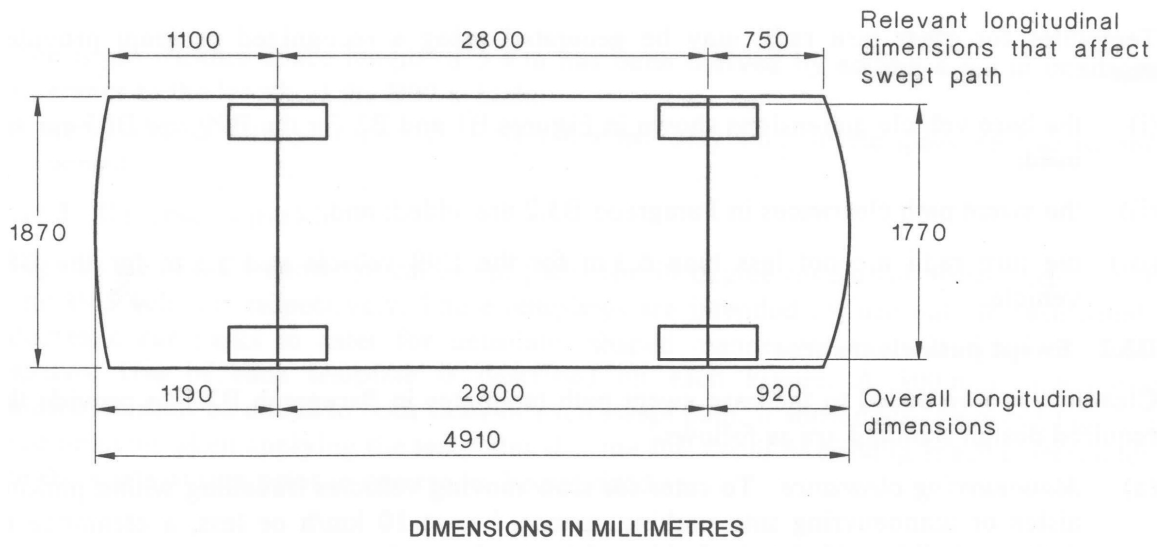

Figure A.3: 85 percentile design motor vehicle dimensions

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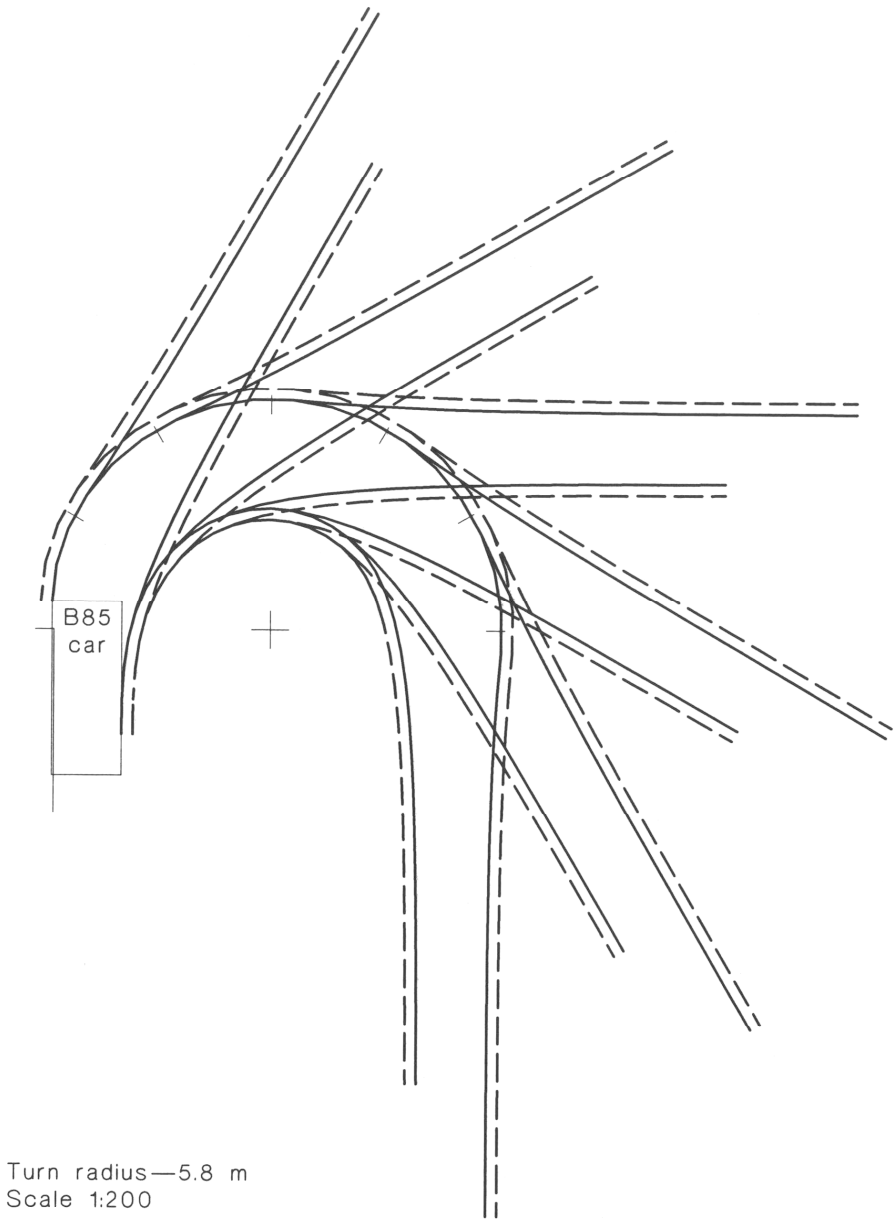

Figure A.4: 85 percentile design motor vehicle 5.8m radius turn

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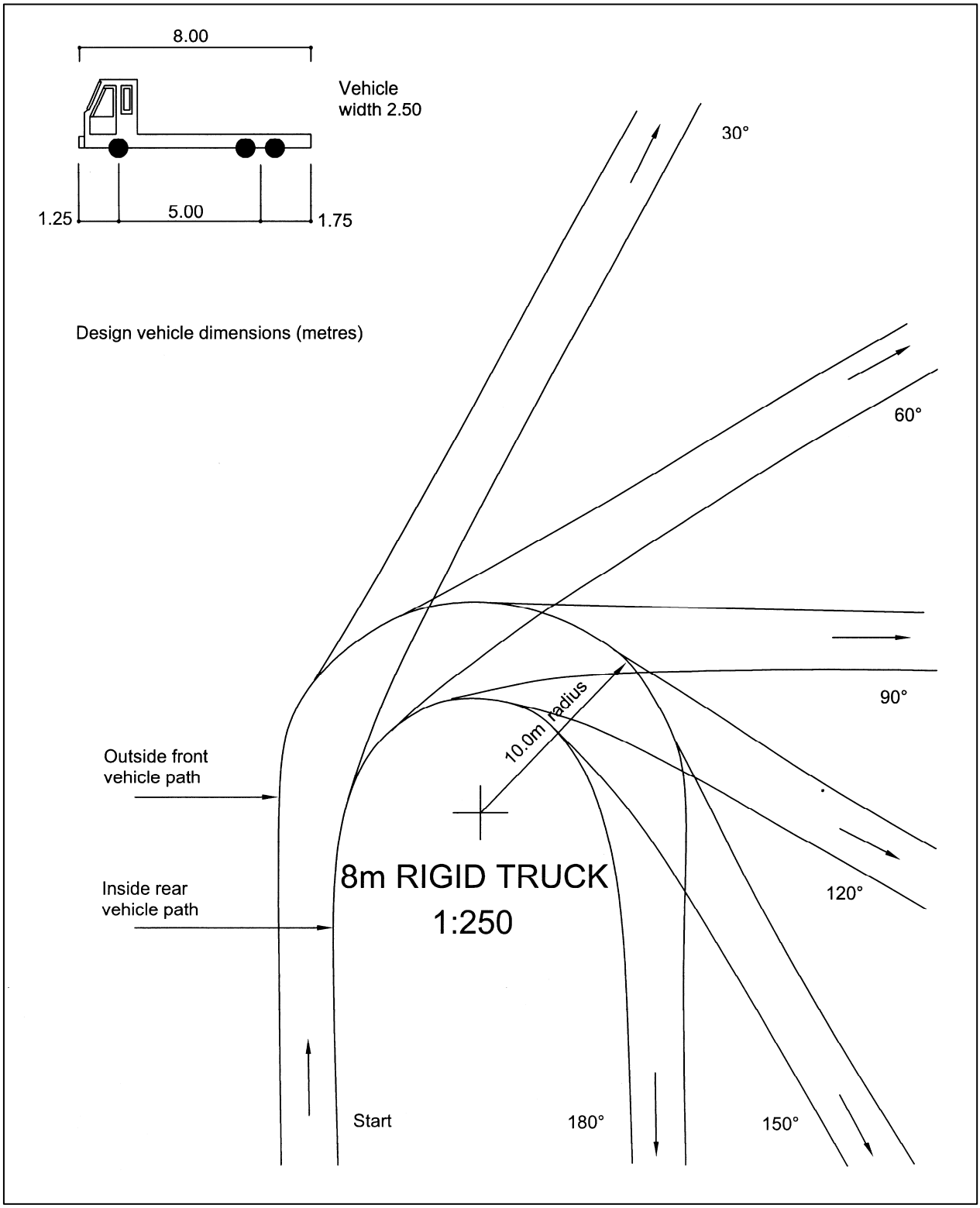
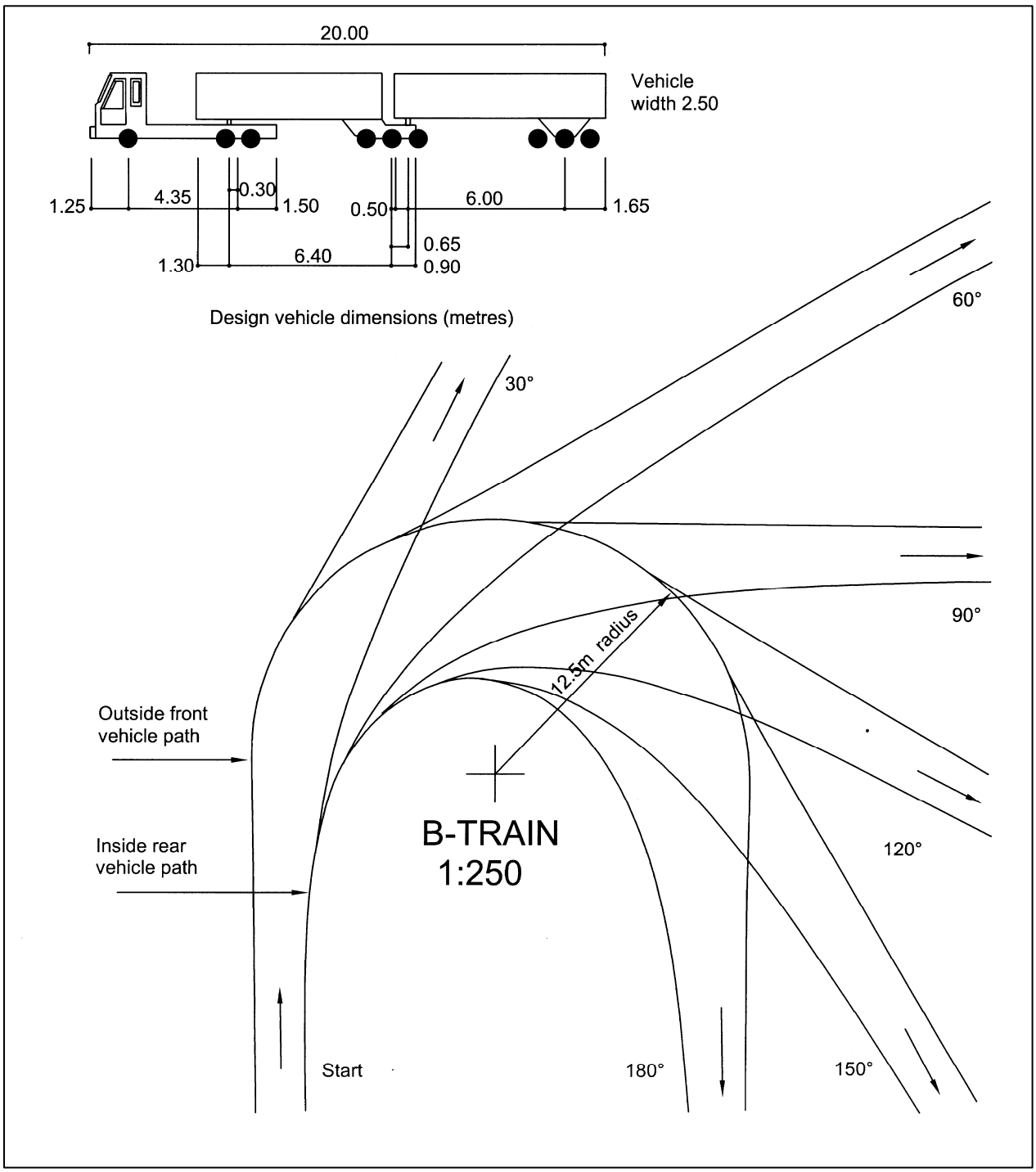
Appendix 20D

8 Metre Rigid Truck



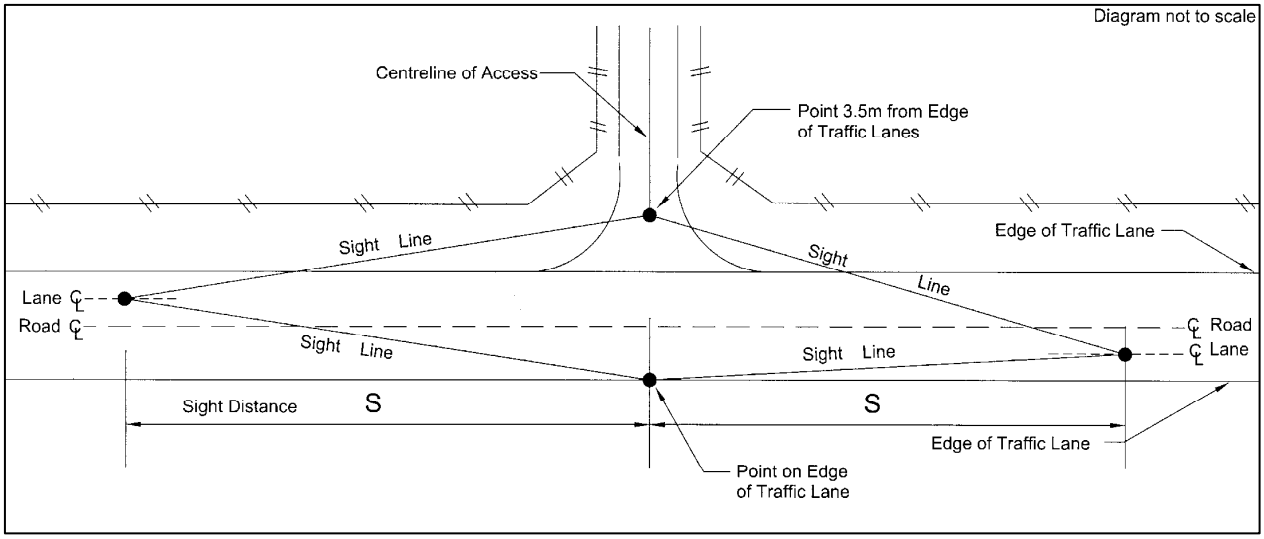
Appendix 20E

B Train Truck



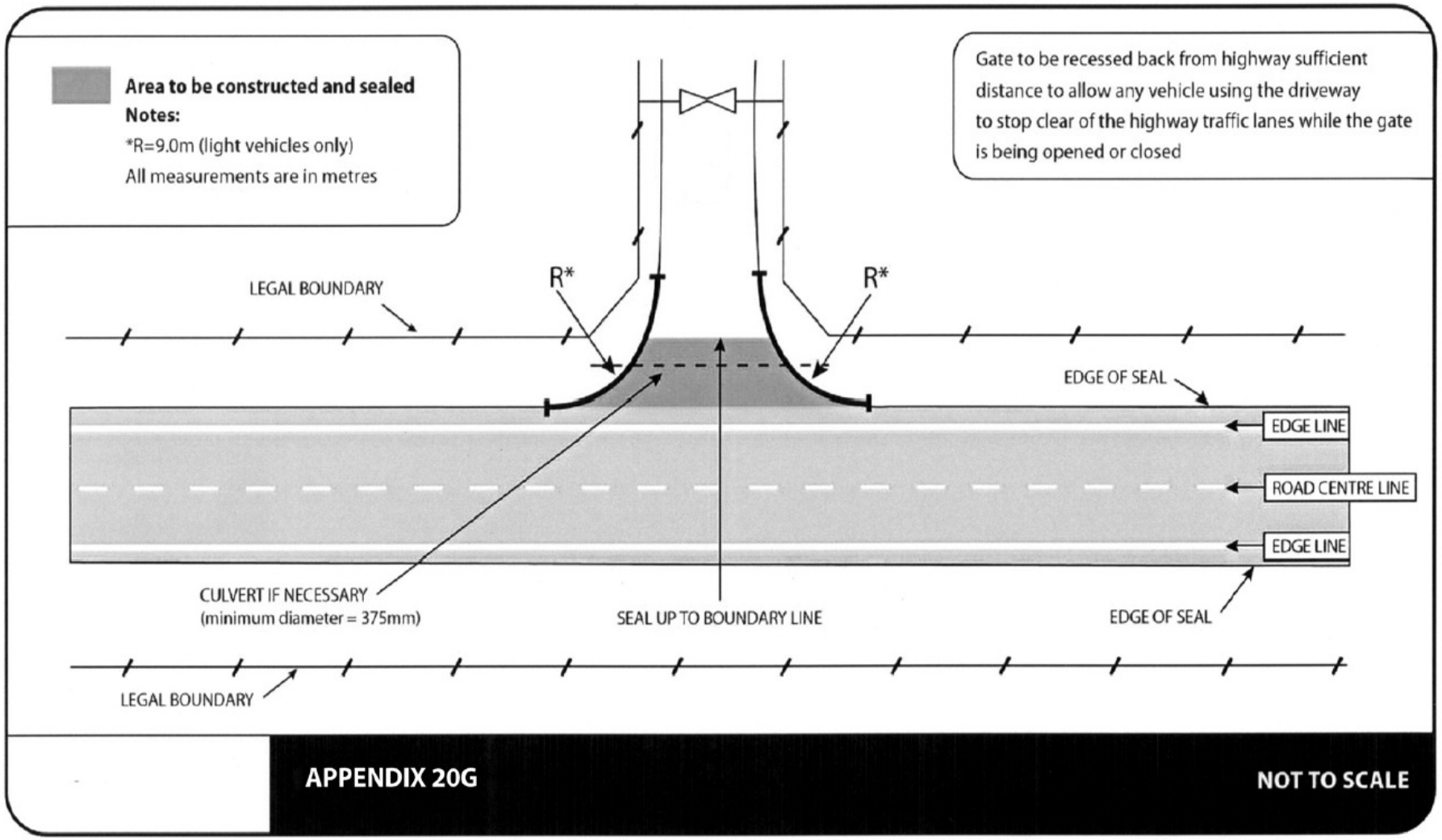
Appendix 20F

Method to Determine Sight Distance at Property Accesses



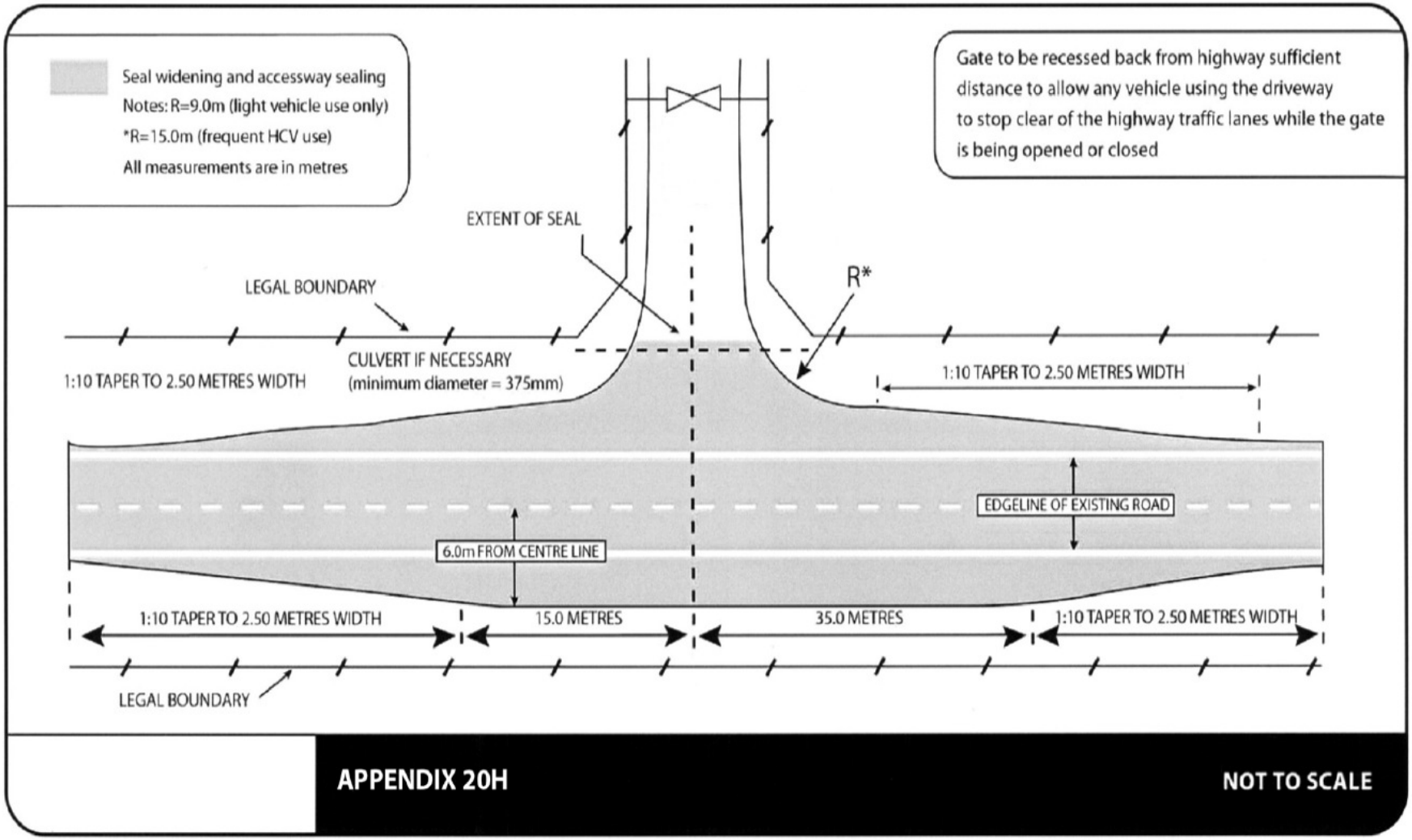
Notes:

1. Sight distances shall be measured to and from a height of 1.15 m above the existing road surface and the proposed surface level of the side road or access.
2. There are to be no obstructions to visibility inside the area bounded by the sight lines.



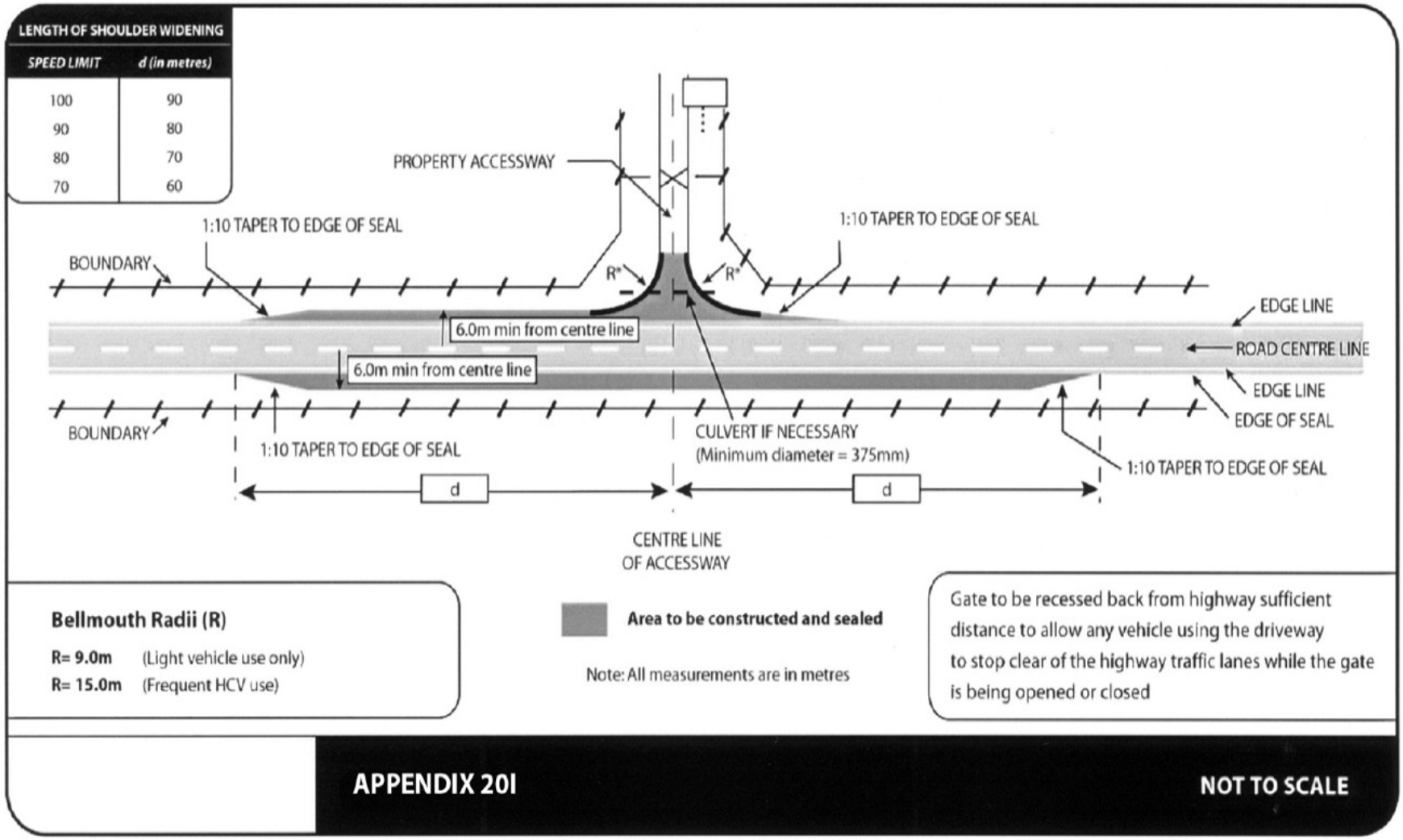
Source: NZ Transport Agency Planning Policy Manual 2007

[Amended by Plan Change 10, 18/1/11]



Source: NZ Transport Agency Planning Policy Manual 2007

[Amended by Plan Change 10, 18/1/11]



Source: NZ Transport Agency Planning Policy Manual 2007

[Inserted by Plan Change 10, 18/1/11]

Appendix 20J

Method to Determine Minimum Distance Between Vehicle Crossing and Intersection

[Inserted by Plan Change 10, 18/1/11]