TR - Transport

~~**This chapter is affected by proposed plan changes**~~

~~Plan Change 1A (Accessible car parking provisions) proposes amendments to the following provisions in this chapter:~~

- ~~Policy TR-PARK-P8~~
- ~~Rule TR-PARK-R18 (this rule has immediate legal effect from notification on 17 February 2022)~~

~~Plan Change 1C (Cycle parking provisions) proposes amendments to the following provision in this chapter:~~

- ~~Rule TR-PARK-R18 (this rule has legal effect once a decision on submissions relating to the rule is made and publicly notified)~~

~~Plan Change 1C also proposes to insert the following provisions into this chapter:~~

- ~~Policy TR-PARK-P8A~~
- ~~Rule TR-PARK-R19 (this rule has legal effect once a decision on submissions relating to the rule is made and publicly notified)~~

Transport *infrastructure* is a physical resource under the Resource Management Act 1991, and must therefore be sustainably managed. The operation of transport systems is also a *land* use activity by virtue of section 9(3) of the *RMA*.

Transportation issues fall into two broad categories:

1. the *effects* of transportation on the environment; and
2. the *effects* of *development* and *land* use on transportation.

This introduction sets out the key transportation issues within the District.

Changes to the *State Highway* Network

In 2010 the Government identified seven *roads* of national significance (RoNS) that are linked to New Zealand's economic prosperity. The Wellington Northern Corridor (Levin to Wellington Airport) is one these, and requires upgrading to reduce traffic congestion, improve safety and support economic growth in New Zealand.

The New Zealand Transport Agency (NZTA) is charged with delivering these highway projects within the next 10 years. As of 2012, there are four NZTA projects in the Kāpiti Coast District which are in various stages of development, as outlined below:

1. Transmission Gully (TG) project
   The Transmission Gully project is a designated 27-kilometre link between MacKays Crossing and Linden. The designated route is shown in the District Plan Maps.

2. MacKays to Peka Peka (M2PP) Expressway
   The MacKays to Peka Peka Expressway project is a four-lane expressway with associated local road improvements and connections.

3. Peka Peka to Ōtaki (PP2O)
   NZTA propose a bypass of Ōtaki, consisting of a four-lane expressway. This will reduce the

congestion commonly experienced when travelling on SH1 through Ōtaki. This project also includes a proposed minor realignment of the North Island Main Trunk railway line.

4. Ōtaki to north of Levin.
   NZTA has identified 30km between Ōtaki and north of Levin for improvements.

Roading and Sustainable Transport

Roads play an important role in meeting the needs of Kāpiti residents and the economy. However, urban areas often suffer poor amenity due to the domination of *road infrastructure*. High car usage also contributes to congestion and *environmental* degradation. More sustainable modes such as walking, cycling and public transport can be more effective ways of moving people especially when all *effects* and costs are considered. A wider range of people are able to use these modes, such as young and older people without cars, therefore making transport more equitable.

***Land* Use and Transport Integration**

Urban form and transport are inextricably linked. *Development* of transport *infrastructure* is a considerable investment and is costly to maintain. Planning the integration of *land* use and transport can make efficient use of existing transportation investment, and open opportunities to improve transport choice that enable the community to improve their wellbeing and reduce overall costs.

At present, the Kāpiti Coast has a dispersed *land* use pattern. This often discourages many residents from using sustainable modes of transport and as a consequence results in relatively high rates of private vehicle travel, both within and out of the District.

Land use activities including subdivision and development can significantly influence travel behaviour. For example, residential *development* near services (such as health services, schools, local *shops* and public transport routes or stops) can reduce the need for private vehicle travel and increase walking, cycling and public transport patronage. Conversely, dispersed forms of *development*, cul-de-sacs and poorly connected communities can increase the reliance on private vehicles.

Strategic Context

The primary objectives that this Chapter implements are:
- DO-O1 - Tangata Whenua;
- DO-O3 - Development Management;
- DO-O8 — Strong Communities;
- DO-O13 - Infrastructure;
- DO-O14 - Access and Transport; and
- DO-O15 - Economic Vitality

DO-O1	Tangata Whenua	
To work in partnership with the *tangata whenua* of the District in order to maintain *kaitiakitanga* of the District's resources and ensure that decisions affecting the natural *environment* in the District are made in accordance with the principles of Te Tiriti o Waitangi (Treaty of Waitangi).		
DO-O3	Development Management	**Amended** 01 Sep 23 PC2
To maintain a consolidated urban form within existing urban areas and a limited number of identified growth areas, and to provide for the *development* of new urban areas where these can be efficiently		

serviced and integrated with existing townships, delivering:

1. urban areas which maximise the efficient end use of energy and integration with infrastructure;
2. a variety of living and working areas in a manner which reinforces the function and vitality of centres;
3. an urban environment that enables more people to live in, and more businesses and community services to be located in, parts of the urban environment:

    a. that are in or near a *Centre Zone* or other area with many employment opportunities; or
    b. that are well serviced by existing or planned public or active transport; or
    c. where there is high demand for housing or for business land relative to other areas within the urban environment;

    while accommodating *identified qualifying matters* that constrain development;

4. resilient communities where development does not result in an increase in risk to life or severity of damage to property from natural hazard events;
5. higher residential densities in locations that are close to centres and public open spaces, with good access to public transport;
6. management of development in areas of special character or amenity in a manner that has regard to those special values;
7. sustainable natural processes including freshwater systems, areas characterised by the productive potential of the land, ecological integrity, identified landscapes and features, and other places of significant natural amenity;
8. an adequate supply of housing and areas for business/employment to meet the needs of the District's anticipated population which is provided at a rate and in a manner that can be sustained within the finite carrying capacity of the District;
9. management of the location and effects of potentially incompatible land uses including any interface between such uses; and
10. urban environments that support reductions in greenhouse gas emissions and are resilient to the current and future effects of climate change.

DO-O8	Strong Communities

To support a cohesive and inclusive community where people:

1. have easy access and connectivity to quality and attractive public places and local social and community services and facilities;
2. have increased access to locally produced food, energy and other products and resources;
3. have improved health outcomes through opportunities for active living or access to health services; and
4. have a strong sense of safety and security in public and private spaces.

DO-O13	Infrastructure

To recognise the importance and national, regional and local benefits of *infrastructure* and ensure the efficient *development*, maintenance and operation of an adequate level of social and physical *infrastructure* and services throughout the District that:

1. meets the needs of the community and the region; and
2. builds stronger community resilience, while avoiding, remedying or mitigating adverse *effects* on the *environment*.

DO-O14	Access and Transport

To ensure that the transport system in the District:

1. integrates with *land* use and urban form and maximises accessibility;
2. improves the efficiency of travel and maximises mode choice to enable people to act sustainably as well as improving the resilience and health of communities;
3. contributes to a strong economy;
4. avoids, remedies or mitigates adverse *effect*s on *land* uses;
5. does not have its function and operation unreasonably compromised by other activities;
6. is safe, fit for purpose, cost effective and provides good connectivity for all communities; and
7. provides for the integrated movement of people, goods and services.

DO-O15	Economic Vitality

To promote sustainable and on-going economic development of the local economy, including the rural sector, with improved number and quality of jobs and investment through:

1.
   a. encouraging *business activities* in appropriate locations within the District, principally through differentiating and managing various types of *business activities* both on the basis of the activity, and the potential local and strategic *effect*s of their operation;
   b. reinforcing a compact, well designed and sustainable regional form supported by an integrated *transport network*;
   c. enabling opportunities to make the economy more resilient and diverse;
   d. providing opportunities for the growth of a low carbon economy, including clean technology;
   e. minimising *reverse sensitivity effects* on *business activities*, including *primary production* activities; and
   f. enhancing the amenity of *working zones*;

while:

2.
   a. ensuring that economic growth and *development* is able to be efficiently serviced by *infrastructure*;
   b. encouraging commercial consolidation and the co-location of community services and facilities primarily within the *Paraparaumu Sub-Regional Centre* and *Town Centres*; and
   c. managing contamination, pollution, odour, *noise* and glare, associated with *business activities,* including *primary production* activities.

The rules in this chapter apply to all land and activities in all *zones* unless otherwise specified. Provisions in other chapters of the Plan may also be relevant.

Policies

TR-P1	Integrated Transport and Urban Form	**Amended** 01 Sep 23 PC2

Development and *subdivision* will be integrated with and consistent with the *transport network hierarchy* in TR-Table 7, and undertaken in a manner and at a rate to ensure:

1. the *transport network* is capable of serving the projected demand safely and efficiently;
2. the location of *development* is appropriate, including providing for the co-location of compatible *developments* and *land* use and transport networks to reduce unnecessary travel;
3. travel time and distance to services are minimised for all modes of travel;
4. *development* is consistent with *Council's Land Development Minimum Requirements*; and
5. enhanced community connectivity is achieved, resulting in more efficient travel patterns from the community.

TR-P2	Sustainable Transport and Maximising Mode Choice	**Amended** 01 Sep 23 PC2

Development and *subdivision* will be integrated with a transport system that offers a wide range of travel mode choices, which connects residents to essential community services, centres and social *infrastructure*, through:

1. well-integrated and connected communities;
2. *development* that is conducive to active modes of travel, particularly walkable communities which reduce demand for vehicular travel, particularly by private vehicle;
3. land use that is integrated with the *transport network*;
4. improved public transport services to the District;
5. *travel plans* and *transport assessments* for *major traffic activities* as part of an application for consent for new *developments*;
6. consistency with the *Council's Land Development Minimum Requirements*; and
7. *development* that ensures adequate access and space for all modes, including pedestrians, people with mobility problems, cyclists, public transport and private car travel.

TR-P3	An Efficient and Economic Transport Network

The *development*, operation, maintenance and upgrading of the *transport network* will increase the economic vitality of the District by:

1. promoting reliable access to basic social, civic and day to day services (such as health services, schools and local shopping facilities) consistent with the *transport network hierarchy* maps, District Plan Maps;
2. promoting timely and reliable access of freight and goods for processing and markets, without compromising the amenity of living and other *sensitive activities*; and
3. promoting reliable access of workers to employment, with a priority placed on local employment access but a recognition of links with regional employment.

TR-P4	Effects of Transport on Land Use/Development

The potential adverse *effects* of *development*, operation, maintenance and upgrading of the *transport network* on *land* use and *development* will be avoided, remedied or mitigated by:

1. ensuring that new *habitable buildings* and future *noise sensitive activities* within close proximity to *roads* identified as a *transportation noise effect route* and the rail corridor as identified on the District Plan Maps are protected from the adverse effects of *road* traffic and rail *noise*;
2. avoiding the significant adverse *effects* of *earthworks* associated with the *transport network*;
3. ensuring that *development* of the *transport network* will:

    a. minimise degradation of *amenity values*;
    b. avoid unacceptable levels of *noise* and vibration, including from *strategic arterial routes*;
    c. minimise disruption or destruction of plant and wildlife habitats;
    d. seek to avoid adverse *effects* on *historic heritage*, and where avoidance is not practicable, any adverse *effects* are remedied or mitigated;
    e. minimise community severance and other social *effects*;
    f. minimise loss of productive *land* and loss of private property;
    g. minimise pollution of *water* resources (e.g., *stormwater* quality and quantity, increased siltation of *waterbodies* due to *road* construction, disruption of *waterbodies* through the use of culverts and piping which can affect fish migration);
    h. avoid unacceptable levels of emissions to air; and
    i. minimise adverse *effects* on pedestrian and cyclist safety and amenity including availability and safety of walkways, footpaths, cycle lanes, tracks, level and impacts of weather protection (including shade).

TR-P5	*Effects* of *Land* use on Transport

The potential adverse *effects* on the *transport network* from *development* and *subdivision* will be avoided, remedied or mitigated by identifying both the key existing transport routes and proposed transport routes likely to be required long term as part of the District's *transport network* and having regard to these when considering applications for *subdivision* or *development*.

TR-P6	Safety

The safety of all transport users will be enhanced during the *development*, operation, maintenance and upgrading of the *transport network*, by:

1. implementing the principles set out in Appendix 6 - Crime Prevention Through Environmental Design (CPTED) Guidelines;
2. requiring that all *developments* provide for safe vehicular and pedestrian access, and have adequate visibility (sight lines);
3. requiring all *developments* to have safe connections to the wider *transport network*; and
4. requiring adequate visibility and sight lines for level crossings.

TR-P7	Cycling, Walking and Bridleway Links and Safety

Subdivision, use and *development* will be as far as practicable, located and designed to make walking, cycling and the use of bridleways safer, more enjoyable and convenient in accordance with the Crime Prevention Through Environmental Design (CPTED) Guidelines set out in Appendix 6 and the following principles:

1. new street linkages will provide safe pedestrian access to *shops* and services and public transport nodes;
2. *subdivision* and *development* will:

    a. enable cycle and pedestrian routes, both on and off *road*, which offer good continuity;
    b. avoid large blocks that severe connectivity; and
    c. consider opportunities to provide bridleways in suitable locations; and

3. *development* will provide for convenient cycle parking facilities in *centres*; and
4. pedestrian and cycle routes will have well designed and built facilities including surface conditions, lighting, signage and passive surveillance from adjacent *development*.

Rules

TR-R1	Maintenance and Repair of *Roads*.	**Amended** 01 Sep 23 PC2
Permitted Activity	**Standards** 1. Compliance with the *permitted activity noise* standards in NOISE. 2. Compliance with Council's *Land Development Minimum Requirements*.	
TR-R2	*Vehicle movements*. **Note:** Where access is to a *Limited Access Road (LAR)* a 'notice of approval' may be required from the requiring authority if changing the use or subdividing a property. The *requiring authority* will be either the NZTA or the Kapiti Coast District Council, check the Record of Title for the *property* for details.	
Permitted Activity	**Standards**	

	1. Up to 200 *vpd* in the *Working Zones*, except: a. where all public *vehicle access* is onto *strategic arterial routes* or *major community connector routes* any activity must not generate more than 100 *vpd*. This excludes Precincts A1, A2 and C which are managed in standards 1 b) and 1 c) below; b. any activity in Precincts A1 and A2 in the *Metropolitan Centre Zone* must not generate more than 200 *vehicle movements* in any hour; c. any activity in *Precinct C* in the *Metropolitan Centre Zone* must not generate more than 50 *vehicle movements* in any hour; d. any *retail activity* within the Ihakara Street West Precinct and Ihakara Street East Precinct with frontage to Ihakara Street or Trieste Way must not generate more than 100 *vehicle movements* in any hour; and e. any traffic generated by an activity *permitted* under GIZ-R5 (on the *site* at LOT 2 DP 441854 (Milne Drive, Paraparaumu) must not generate more than 50 vehicles per peak hour. 2. In all other *zones*, any activity must not generate more than 100 *vpd*, except *extractive industries* that are provided for as a *restricted discretionary activity* under EW-EXT-R13. 3. Standards 1 and 2 above shall not apply to *temporary events* or *regular markets*. **Note**: *Vehicle movements* generated by *temporary events* are managed under TEMP-R1.	
TR-R3	*Site* access and *loading*.	**Amended** 01 Sep 23 PC2
Permitted Activity	**Standards** 1. Access - every *site* must provide either: a. vehicular access over *land* or by mutual right of way or service lane for parking and/or *loading* and shall be in accordance with TR-Diagram - 2; or b. for sites with no carparking or *loading* spaces, pedestrian access over *land* or by mutual right of way with a minimum 1.8 metre legal width may be provided as an alternative to *vehicle access*. 2. *Vehicle access* and pedestrian access - all *vehicle accesses* and pedestrian accesses must be designed, constructed and maintained to ensure that: a. they are able to be used in all weather conditions; b. they have no adverse impact on the roadside drainage system; and c. surface *water* and detritus (including gravel and silt) does not migrate onto the highway pavement. 3. *Vehicle access* - all *vehicle accesses* must meet the following: a. be a minimum of 3.5 metres wide, except for as set out in TR-Table 1. b. be a maximum of 9 metres wide, except in the Beach Residential Zone at Waikanae Beach where the maximum shall be 6.0 metres wide. 4. *Vehicle access - sites* containing *non-residential activities* and which provide more than 6 *carparks*, shall provide two-way *vehicle accesses* which must be a minimum of 6 metres wide.	

5. *Vehicle access* to/from a *state highway* - *sites* that only have *vehicle access* via a *state highway* must only have one *crossing point* and shall be in accordance with Diagrams TR-Diagram - 1 and TR-Diagram - 2.
6. *Vehicle access* spacing - at intersections (except on *strategic arterial routes*) carrying traffic volumes of 1,000 vehicles or more in any peak hour, or at which traffic signals are operating, no part of a *crossing point* must be located within 30 metres of an intersection or within 60 metres on the departure side of an urban *state highway* intersection.

Note: The distance is measured from the intersecting point of the kerb lines or *road* edge lines.

7. *Vehicle access* spacing - Where a site is located near an intersection having volumes less than 1,000 vehicles in any peak hour; the minimum distance between the *crossing point* and the roadway edge or kerb line must be:

    a. 9 metres measured from the intersecting point of the kerb lines or *road* edge lines or 4.5 metres from the tangent point of the kerb lines or *road* edge whichever is greater; and
    b. 12 metres where a "Stop" or "Give Way" control exists on the roadway measured from the intersecting point of the kerb lines or *road* edge lines.

8. *Vehicle access* spacing for *major traffic activities* - no *crossing point* must be located closer to any intersection than the distance specified in TR-Table 2 - Access Distance Dimensions. Distances are measured in metres (m) to the intersecting kerb line.
9. *Vehicle access* spacing sight distances - the required minimum sight distance between the *vehicle access* and the *road* must be in accordance with TR-Diagram - 3 and TR-Table 3 - Sight Distance Dimensions} (where m = metres)
10. *Vehicle access* spacing for *state highways* - the minimum distance between *vehicle accesses* on the same side of the *road* must be 7.5 metres for *residential activities (*excluding *visitor accommodation* that is not *temporary residential rental accommodation*) and 15 metres for all other activities.
11. The minimum separation distances between *vehicle access* to/from a *state highway*/rural *road* and an intersection on that *state highway*/rural *road*, between a *vehicle access* to/from a local *road* and the intersection of that local *road* with a *state highway*/rural *road* and between *vehicle accesses* to/from a *state highway*/rural *road* must meet the provided distances in TR-Table 4 - Access Distance Dimensions for *State Highways* and Rural *Roads* (where m = metres, km/h = kilometres per hour, and *vpd* = vehicles per day)
12. Manoeuvring —

    a. Private residential access - unless the *driveway* accesses directly from a Neighbourhood Access Route, sufficient manoeuvring space must be provided on-site to ensure no reversing onto the *road* is necessary. Note: for clarification see the *Transport Network Hierarchy* .
    b. Commercial *properties* — must ensure that all *buildings* and parking areas are designed so that sufficient manoeuvring space is provided on-site to ensure no reversing onto the *road* is necessary.

13. *Loading* spaces - every *property* in all *Working Zones*, the layout of *loading* spaces must comply with the 90 percentile design two-axled truck as defined by the Ministry of Transport and shall be designed in accordance with TR-Diagram - 7 .

	14. *Landscaping* - for all *non-residential activities*, any parking, *loading* or trade vehicle storage area must be separated from adjoining *sites* by a minimum depth of 2 metres of *landscaping*. 15. *Landscaping* - all *landscaping* adjoining the *road boundary* of *subject sites*, must be designed and maintained so that visibility to and from the *crossing point* complies at all times with the minimum standards sight distances set out in TR-Table 3 Sight Distance Dimensions.

Advice note:
Clause D1 of the New Zealand Building Code specifies requirements for physical pedestrian access to buildings that must be achieved in order to comply with the requirements of the Building Act 2004.

TR-Table 1	Activity	Minimum width	Minimum unobstructed *height* above the access
	Commercial activities excluding *retail activities* and *industrial activities*	6 metres	2.8 metres
	Habitable buildings in Rural *Zones* (except for the Paraparaumu North Rural Precinct)	3.5 metres	4 metres
	Plantation forestry activities in Rural *Zones*	2.5 metres	2.8 metres
	Metropolitan Centre Zone, Mixed Use *Zone*, *Town Centre Zone*, Local Centre Zone, Hospital *Zone*, *General Industrial Zone*, Airport Zone	3.5 metres	2.8 metres

TR-Table 2 - Access Distance Dimensions	Frontage *Road*	Distance From Strategic Arterial	Distance From Major CC & C Routes	Distance From Local CC and NA Routes
	Strategic Arterial Routes	60m	45m	30m
	Major Community Connector (CC) Routes and *Centres* (C) Routes	45m	30m	30m
	Local Community Connector Routes & Neighbourhood Access (NA) Routes	30m	30m	15m

TR-Table 3 -	Minimum sight distance (m)

Sight Distance Dimensions	Posted speed limit (km/h)	*State Highway*	Other *Roads*	
			Private access	*Commercial Activities* & Rural selling place
	50	113	50	-
	60	140	60	-
	70	170	70	85
	80	203	80	105
	90	240	80	130
	100	282	100	160

TR-Table 4 - Access Distance Dimensions for *State Highways* and Rural *Roads*	Posted speed limit (km/h)	Minimum distance between access and nearest intersection (m)	Minimum distance between local road access and intersection (m)	Minimum distance between accesses (m)	Minimum access spacings on *strategic arterial routes* carrying over 10,000 *vpd*
	50	30	20	-	160
	60	30	20	-	220
	70	100	45	40	305
	80	100	45	100	400
	90	200	60	200	500
	100	200	60	200	500

TR-R4	Design and layout of vehicle parking for all activities.
Permitted Activity	**Standards** 1. All parking must be formed, marked out and maintained for use in all weathers. 2. Surface *water* originating from the parking area must be managed without adversely impacting other *properties* either upstream of downstream of the *development subject site.* 3. Vehicles using the parking area must only use the *formed vehicle access* point (*crossing point*) to enter and exit the vehicle parking areas.
TR-R5	Parking layout and design for all activities except *residential activities. Visitor accommodation* that is not *temporary residential rental accommodation* is included in this rule.
Permitted Activity	**Standards** 1. All parking must be sealed or otherwise maintained to have a *dust* free surface, at all times, and shall comply with *car parking* dimension standards in TR-Diagram - 8 of this chapter. 2. All parking must be formed, marked out and maintained for use in all weathers.

	3. When a parking area is required to accommodate three or more vehicles, parking spaces together with access and turning spaces must be designed so as to ensure that vehicles are not required to reverse either on to or off legal *road*. 4. In the case where parking areas adjoin a *Residential Zone*, either a 2-metre high fully enclosed screen must be erected or a strip of minimum width of 5 metres adjoining the *Residential Zone* must be landscaped as follows: a. where a carparking area incorporates more than 5 *carparks*, 1m² of *landscaping* is required per *carpark* and must incorporate one *tree* capable of growing to 5 metres in *height* along every 10 metres of the *carpark's* street frontage; b. the amount of *landscaping* will be considered as a total, and street frontage *landscaping* and any *landscaping*/*open space* provided in terms of the *Open Space* and Recreational *Zone* section, and the Natural Environment Values section will be taken into account when assessing the 1m² of *landscaping* per *carpark*; c. planting must be completed within 12 months of commencement of the activity; d. the *landscaping* must be maintained in healthy condition and clear of litter; e. vehicle *crossing points* and pedestrian areas within public *carparks* must have illumination consistent with the Crime Prevention Through Environmental Design (CPTED) Guidelines (Appendix 6). 5. In the case where parking areas are located within the front *yard* of a *subject site*, a 2-metre wide strip must be formed along the front *yard* (except for vehicle crossings) of any carparking area which shall be landscaped to create a visual and physical barrier between the *carpark* area and the *road*. 6. Design for any critical access conditions, such as a ramp included as part of a parking *building*, must accommodate a 99 percentile design motor car in accordance with TR-Diagram - 6 of this Chapter.
TR-R6	*Heavy trade vehicle* access
Permitted Activity	**Standards** 1. *Heavy trade vehicle* accesses, including those for milk tankers and stock trucks, must be designed and constructed to carry the volume and weight of traffic likely to use the access and shall be designed in accordance with TR-Diagram - 4. 2. The surface of a *heavy trade vehicle* access must be constructed to the same standard as the adjoining *road carriageway*. This requirement must be deemed to have been complied with if the first 12 metres of the *vehicle access*, measured from the near edge of the *carriageway*, is so constructed. 3. *Heavy trade vehicle* accesses must be designed and constructed so that no *heavy trade vehicle* has to cross the *road carriageway* centre line when making a left turn.
TR-R7	*Vehicle access* across a railway level crossing
Permitted Activity	**Standards** 1. Existing accesses or *roads* that cross the rail network via a level crossing must be in accordance with the sight triangles provided in TR-Diagram - 9. 2. There must be no new vehicle crossing created within 30m of a level crossing.
TR-R8	*Service Stations*

Permitted Activity	**Standards** **Pedestrians** 1. There must be no access to or from *service stations* across any footpath where the number of pedestrians exceeds 1,000 per hour for two or more hours of any day of the week for four or more weeks of the year. **Visibility** 2. Sight distances to and from any access must comply with the distances in TR-Table 5 - Minimum Sight Distances from Access. The table shall be interpreted in accordance with TR-Diagram - 3 of this chapter (where m = metres and km/h = kilometres per hour). **Arterial Route Stations** 3. For *service stations* on *limited access roads* (*LAR*), *Strategic Arterial Routes, roads* carrying in excess of 10,000 vehicles per day (*vpd*), on rural *state highways* carrying over 3,000 *vpd*, or along *roads* where the *85 percentile speed* exceeds 70km/hr; the following *conditions* must apply: a. pumps or dispensing points must be located at least 9 metres from the limits of the *road boundary*; and b. deceleration and acceleration lanes must be provided in accordance with TR-Diagram - 4 of this Chapter. **Median Divided *Roads*** 4. *Service stations* on *roads* that have central medians separating opposing traffic flow must operate only as left turn in, left turn out. No operating in the central median must be provided to facilitate entry or exit from the *service station* for traffic on the opposite side of the *road*. **Provisions for *Road* Widening** 5. Where the *road* controlling authority has designated *road* widening, the future *road boundary* and roadway edge should be used to determine relevant distances stated in this ordinance. **Manoeuvring Space** 6. To achieve easy ingress and egress, it must not be necessary for vehicles to make turns of less than 4.5-metre radius. Where the maximum turning radius is between 4.5 metres and 7.5 metres, a path width of 4.5 metres must be provided. For turns of 7.5 metres or greater, a minimum path width of 3.5 metres shall be provided. These path widths must be measured between pumps or dispensers and any kerb, nib-wall or planter box etc. 7. Where it is necessary to have large vehicles such as buses, trucks or tankers passing alongside pumps or dispensers, they must not in any case need to make turns less than 7.5-metre radius and must have a minimum path width of 4.5 metres. **Location of Pumps/ On-site Facilities**

8. Any pump or dispensing point must not be located:

    a. within 7 metres of any part of a *crossing point;* or
    b. within 4.5 metres of the *road boundary* (which must not be an accessway) except under the following conditions:

        i. where pumps or dispensing points are located closer than 3 metres to the *road boundary*, a wall of at least 1.5 metres in *height* (from the base of the wall) must be erected on the *boundary*; or
        ii. where the pumps or dispensing points are between 3 metres and 4.5 metres from the *road boundary,* the *road boundary* must be defined by a nib-wall or planter box.

9. On-site facilities such as a car-wash, lube bay, or air hose pump must not be located in such a way that waiting vehicles will obstruct the normal paths of vehicles moving to and from the *subject site*.

Driveways/ Crossing Points

10. *Driveways* and *crossing points* must be clearly defined and shall be restricted to the widths required by TR-Table 6 - Width Restrictions of *Driveways/Crossing Points* (where m = metres).
11. *Crossing points* providing access to/from the *subject site* must be separated by a minimum of 10 metres except for *service stations* located on a *State Highway* where *crossing points* shall be separated by a minimum of 15 metres.
12. *Crossing points* and *driveways* must be located and designed so that a tanker can enter and leave the *subject site* without crossing the centre line of the *road carriageway*.

Location of Filling Points

13. Filling points must not be located so that tankers need to park on legal *road*.
14. Fillings points must be located so that tankers do not obstruct the *driveways* and *crossing points*.

Treatment of Surface Water

15. Surface (storm) *water* resulting from the *service station* premises must be treated prior to entering *Council's* reticulated services by:

    a. an interceptor trap to remove petroleum products; and
    b. settlement tank(s) to remove grit.

TR -Table 5 - Minimum Sight Distance From Access

85 Percentile Speed (km/h)	Sight Distance (m)
50	30
60	30
70	100
80	100

	90	200
	100	200

TR -Table 6 - Width Restrictions of *Driveways/ Crossing Points*		Minimum width (m)	Maximum width (m)
	One-way *driveways* (with no tanker movements)	3.5	6.0
	One-way *driveways* with tanker movements	6.0	9.0
	Two-way *driveways*	6.0	9.0

TR-R9	New *roads* including where they are to serve a *subdivision* (including *boundary adjustments*).	**Amended** 01 Sep 23 PC2

Controlled Activity	**Standards**	**Matters of Control**
	1. All *roads* in the *Centres Zones* must have foot paths on both sides of the *road carriageway*. 2. Cycle paths must be provided either as on-street cycle lanes, off-street shared paths or off-street dedicated cycle paths.	1. The route of the *road.* 2. The design and construction of the *road*, including safety, traffic engineering, *landscaping* and *noise* mitigation measures. 3. The degree of consistency with the *Transport Network Hierarchy.* 4. The imposition of *financial contribution*s in accordance with the FC - Financial Contributions chapter. 5. The provision of grassed swales to direct **road**-run-off (instead of concrete kerb and channel) in *Residential Zone* areas, where grassed swales would be in keeping with the surrounding environment and functional. 6. The provision of footpaths in *Residential Zone* areas, where footpaths are not part of the surrounding *environment*. 7. The degree of consistency with: a. Council's *Land Development Minimum Requirements*; b. Council's Best Practice and Subdivision Guide; c. NZS4404.2010 Land Development and Subdivision Infrastructure; d. AUSTROADS Guide to Traffic Engineering Practice Part 14

		Bicycles and Part 6A Guide to Road Design -Pedestrian and Cycle Paths; and e. New Zealand Transport Agency Cycle Network & Route Planning Guide 2004.
TR-R10	Vehicle movements that do not meet the *permitted activity* standards under TR-R2 (therefore deemed a *major traffic activity(ies)*).	**Amended** 01 Sep 23 PC2
Restricted Discretionary Activity	**Standards** 1. Any activity in *Precinct B* or *Precinct C* shall not generate more than 200 *vehicle movements* in any hour. 2. A *Transport Assessment* and a *Travel Plan* must be prepared by a suitably qualified person *and* submitted to *Council* with the application for *resource consent*. **Note:** Please refer to the publication Greater Wellington Regional Council Publication titled "Get your workplace moving - A guide to transport solutions for your staff and business" for guidance on preparing Travel Plans.	**Matters of Discretion** 1. Consistency with Policies TR-P1,TR-P2 TR-P3, TR-P4, TR-P5, TR-P6, TR-P7 & TR-PARK-P8. 2. Consistency with Council's *Land Development Minimum Requirements*. 3. The extent to which the *Transport Assessment* is consistent with Policies TR-P1,TR-P2 TR-P3, TR-P4, TR-P5, TR-P6, TR-P7 & TR-PARK-P8 and Council's *Land Development Minimum Requirements*. 4. The extent to which the content of the Travel Plan is consistent with TR-P1,TR-P2 TR-P3, TR-P4, TR-P5, TR-P6, TR-P7 & TR-PARK-P8 and Council's *Land Development Minimum Requirements*.
TR-R11	Any activity which is not a *permitted, controlled, restricted discretionary* or *non-complying activity*.	
Discretionary Activity		
TR-R12	Maintenance and repair of *roads* that do not meet *permitted activity* standards under TR-R1.	
Discretionary Activity		
TR-R13	Any activity that does not meet any one or more of the *permitted activity* standards under Rules TR-R4, TR-R5, TR-R6, TR-R7, or TR-R8.	
Discretionary Activity		
TR-R14	Any new *vehicle access* across a railway that does not meet any one of the *permitted activity* standards under TR-R7.	
Discretionary Activity		
TR-R15	New *roads* including where they are to serve a *subdivision* (including *boundary adjustments*) that do not meet any one of the *controlled activity* standards under TR-R9.	
Discretionary		

Activity	
TR-R16	Permanent parking (i.e. more than two times in any one week) for more than 12 consecutive hours of any registered *heavy trade vehicle* within the Residential Zones, Waikanae North Development Area, Ngārara Development Areas, or within 40 metres of a *habitable building*.
Non-Complying Activity	
TR-R17	The parking or placing of any motor vehicle, boat, caravan or material for the purpose of sale or lease, within legal *road* or public reserve other than areas specified by the resolution of *Council*.
Non-Complying Activity	

TR-PARK - Parking

TR-PARK-P8	Parking	**Amended** 14 Feb 24 PC1A

~~Plan Change 1A (Accessible car parking provisions) proposes amendments to this policy.~~

All new *subdivision* and *development* shall provide for safe vehicular and pedestrian access and appropriate *accessible* ~~*vehicle parking areas*~~*carparks* by:

1. providing *accessible* ~~*parking*~~*carpark* numbers, layouts and dimensions consistent with ~~parking standards~~standards that meet the needs of users;
2. supplying adequate off street ~~parking~~ *accessible carparks* to meet the demand of the *land* use while having regard to the following factors:

    a. the intensity, duration location and management of the activity~~.~~;
    b. the adequacy of ~~parking~~ *accessible carparks* in the location and adjacent areas~~.~~;
    c. the classification and use of the *road* (as per transport network hierarchy in TR-Table 7), and the speed restrictions that apply~~.~~;
    d. the nature of the *subject site*, in particular its capacity to accommodate ~~parking.~~*accessible carparks;*
    e. the characteristics of the previous activity ~~that utilised~~undertaken on the *subject site*;
    f. where the new *development* is an alternative or addition to an existing *building*, the actual demand for *accessible carparks* created by the additional *gross floor area* added to the existing *building* (excluding any uncovered patio or deck); and

3. taking *effects* on neighbouring areas into account when designing the location, layout and number of ~~parking spaces (including car and~~ cycle parks and ~~disability car parks~~*accessible carparks;*
4. *ensuring the location, layout and number of ~~disability carparks and~~ cycle parks and accessible carparks is safe, user-friendly and appropriate; and*
5. ~~*achieving a balance between encouraging mitigation of parking overflow*~~*recognising that, where an existing ~~effects~~building comprises multiple individual businesses or activities (e.g. ~~shared use~~a shopping mall) any existing accessible carparks available for that building will be considered to contribute to meeting demand for accessible carparks associated with new activities within the existing building provided that any alterations or additions to facilitate the new activity do not*

	increase the gross floor area of ~~car parking), and discouraging car-based travel through use of~~*the existing* ~~travel plans~~*building*.
TR-PARK-R18	~~Any activity requiring~~*Accessible carparks* *Measurement criteria* apply to activities under this rule: 1. When measuring *gross floor area*, include: covered yards and areas covered by a roof but not enclosed by walls. Exclude: uncovered stairways; floor space in terraces (open or roofed), external balconies, breezeways or porches; roof car parking, lift towers and machinery rooms on the roof having a floor area of not more than 200m^2; car parking areas; and floor space of interior balconies and mezzanines not used by the public. 2. Where specified in TR-Table 6A, additional ~~carparks~~*measurement criteria* apply to activities under this rule.

~~Plan Change 1A (Accessible car parking provisions) proposes amendments to this rule, which have immediate legal effect from notification on 17 February 2022.~~
~~Plan Change 1C (Cycle parking provisions) proposes amendments to this rule, which have legal effect once a decision on submissions relating to this rule is made and public notified.~~

Permitted Activity	**Standards** 1. ~~Disabled~~ *Accessible* ~~persons~~ *carparks* ~~and bicycle parking must~~ *must be* ~~required~~*provided* *at* ~~a~~*the* *rate* ~~of~~*shown in TR-Table 6A below*: *a.* ~~*1 where 10 or less carpark spaces are provided;*~~ *b.* ~~*2 where between 11 and 100 carpark spaces are provided, plus 1 additional park for every additional 50 carparks, or part thereof, where more than 100 carpark spaces are provided.*~~

TR-Table 6A: Minimum number of *accessible carparks:*	Activity	*Gross floor area* or bar area, where stated	Staff/employee numbers	Visitor/people numbers	No of units	Other requirement
	MEDIUM DENSITY HOUSING					
	Multi-unit residential				4 — 5 units: 1 space 6 — 25 units: 2 spaces Plus 1 additional space for every additional 25 units, or part thereof	
	TEMPORARY ACCOMMODATION					
	Hostels/Hotel/ Motels and *Visitor Accommodation – Minor*	12m^2 — 43m^2 of bar area: 1 space 44m^2 — 400m^2 of bar	4 — 20 staff: 1 space 21 — 200 staff: 2 spaces		2 — 5 units: 1 space 6 — 25 units: 2 spaces	3 — 10 bedrooms/ guestroom/ campsite or motorhome

	residential units are exempt from this standard.	area: 2 spaces Plus 1 additional space for every additional 200m^2 of bar area, or part thereof	Plus 1 additional space for every additional 100 staff, or part thereof		Plus 1 additional space for every additional 25 units, or part thereof	site: 1 space 11-100 bedrooms/ guestroom/ campsite or motorhome site: 2 spaces Plus 1 additional space for every additional 50 bedrooms/ guestroom/ campsite or motorhome site, or part thereof
	INDUSTRIAL ACTIVITIES					
	Manufacturing and service	100m^2 — 500m^2: 1 space 501m^2 — 5000m^2: 2 spaces Plus 1 additional space for every additional 2500m^2, or part thereof				
	Tradesmen's Workshops/*Service Station*/ Motor garages		3 — 15 employees: 1 space 16 — 150 employees: 2 spaces Plus 1 additional space for every additional 75 employees, or part thereof			1 to 3 Workshop Bays: 1 space 4 — 25 Workshop Bays: 2 spaces Plus 1 additional space for every additional 13 Workshop Bays, or part thereof
	Warehouses (Trading)	100m^2 — 350m^2:				

		1 space 351m^2 — 3333m^2: 2 spaces Plus 1 additional space for every additional 1666m^2, or part thereof				
	Warehouses (Storage)	300m^2 — 1500m^2: 1 space 1501m^2 — 15000m^2: 2 spaces Plus 1 additional space for every additional 7500m^2, or part thereof				
	RETAILING					
	Retailing, *retail activities* and *retail outlets* and other activities involving *retailing*. *Measurement criteria*: 1. *gross floor area* or display area, where applicable, whichever is greater. 2. Where a proposed activity occurs within an existing *building* comprising multiple individual	100m^2 — 350m^2: 1 space 351m^2 — 3333m^2: 2 spaces Plus 1 additional space for every additional 1666m^2, or part thereof				

	businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for that *building* may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.					
	Roadside stalls on *strategic arterial routes*	Up to 30m^2: 1 space				
	Large Format Retailing Measurement criteria: Where a proposed activity occurs within an existing *building* comprising multiple individual businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for	500m^2 — 2000m^2: 2 spaces Plus 1 additional space for every additional 1000m^2, or part thereof				

	that *building* may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.					
	Supermarkets Measurement criteria: Where a proposed activity occurs within an existing *building* comprising multiple individual businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for that *building* may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.	500m^2 — 2000m^2: 2 spaces Plus 1 additional space for every additional 1000m^2, or part thereof				
	HOSPITALITY					
	Taverns / licenced premises (excluding restaurants) *Measurement criteria*:	12m^2 — 40m^2: 1 space 41m^2 — 400m^2: 2 spaces Plus 1 additional	5 — 20 staff: 1 space 21 — 200 staff: 2 spaces Plus 1 additional			

	Measured by *gross floor area* served by the bar (excluding restaurants).	space for every additional 200m^2, or part thereof	space for every additional 100 staff, or part thereof			
	Restaurants *Measurement criteria*: Where a proposed activity occurs within an existing *building* comprising multiple individual businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for that *building* may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.		5 — 20 staff: 1 space 21 — 50 staff: 2 spaces Plus 1 additional space for every additional 25 staff, or part thereof	15 — 50 people: 1 space 51 — 500 people: 2 spaces Plus 1 additional space for every additional 250 people, or part thereof		
	COMMERCIAL ACTIVITIES					
	Non-retail *commercial activities* *Measurement criteria*: 1. Measured by *gross floor area* or display area, where applicable, whichever	100m^2 — 350m^2: 1 space 351m^2 — 3333m^2: 2 spaces Plus 1 additional space for every additional 1666m^2, or part thereof				

	is greater. 2. Where a proposed activity occurs within an existing *building* comprising multiple individual businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for that *building* may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.					
	RECREATION ACTIVITIES					
	Sports Fields (including lawn bowls)					1 — 4 sports field: 2 spaces Plus 1 additional space for every 2 additional sports fields, or part thereof
	Court Sports (including bowling	15m^2 — 50m^2: 1 space 51m^2 — 500m^2:				1 — 3 Courts: 1 space

	alleys); Clubrooms; and Grandstands. *Measurement criteria*: 1. Measured by the number of courts or *gross floor area*, whichever is greater.	2 spaces Plus 1 additional space for every additional 100m^2, or part thereof				4 — 25 Courts: 2 spaces Plus 1 additional space for every 13 additional Courts, or part thereof
	CHURCHES, CINEMAS, HALLS, CONFERENCE FACILITIES, FUNERAL HOMES, CREMATORIUMS AND *ENTERTAINMENT ACTIVITIES*					
	Churches, cinemas, hall, conference facilities, funeral homes, crematoriums and *entertainment activities* *Measurement criteria*: 1. Measured by either *gross floor area* or no. of seats/ patrons, whichever is greater. 2. The following *measurement criteria* applies when measuring any *cinema*, *conference facility* or *entertainment activity*: Where a proposed activity	30m^2 — 100m^2: 1 space 101m^2 — 1000m^2: 2 spaces Plus 1 additional space for every additional 500m^2, or part thereof		18 — 60 seats/ patrons: 1 space 61 — 600 seats/ patrons: 2 spaces Plus 1 additional space for every additional 300 seats/ patrons, or part thereof		

	occurs within an existing *building* comprising multiple individual businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for that building may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.					
	HEALTHCARE					
	Doctors; Hospitals; Medical Centres/ Health Specialists; and Veterinary Surgeons *Measurement criteria*: The following *measurement criteria* applies when measuring Doctors, Medical		1 — 3 full time equivalent specialist (doctor, vet etc): 1 space 4 — 25 full time equivalent specialists: 2 spaces Plus 1 additional space for every additional 12.5 full time	3 — 15 residents/ patient beds: 1 space 16 — 143 residents/ patient beds: 2 spaces Plus 1 additional space for every additional 72 residents/ patient beds, or part thereof		

	Centres and Health Specialist activities: Where a proposed activity occurs within an existing *building* comprising multiple individual businesses or activities (e.g. within a shopping mall) any existing *accessible carparks* available for that *building* may be considered to contribute to meeting demand for *accessible carparks* associated with the proposed activity.		equivalent specialists, or part thereof 5 — 20 full time equivalent non specialist staff: 1 space 21 — 200 full time equivalent non specialist staff: 2 spaces Plus 1 additional space for every additional 100 full time equivalent non specialist staff, or part thereof			
	EDUCATIONAL FACILITIES					
	Kindergartens/ day care centres/ nurseries; Primary/ Secondary schools; Work skills training centres.		5 — 20 staff: 1 space 21 — 200 staff: 2 spaces Plus 1 additional space for every additional 100 staff, or part thereof			
	Tertiary establishments *Measurement criteria*: The number of full-time		5 — 20 staff: 1 space 21 — 200 staff: 2 spaces Plus 1	11 — 50 full time students: 1 space 51 — 500 full time		

	students is based on the maximum number of students on-site at any one time.		additional space for every additional 100 staff, or part thereof	students: 2 spaces Plus 1 additional space for every additional 250 full time students, or part thereof		
	SUPPORTED LIVING ACCOMMODATION					
	Supported living accommodation		5 — 20 staff members: 1 space 21 — 200 staff members: 2 spaces Plus 1 additional space for every additional 100 staff members on the subject site, or part thereof			9 — 40 beds: 1 space 41 — 400 beds: 2 spaces Plus 1 additional space for every additional 200 beds, or part thereof

TR-PARK-R31	Shared use of *carpark* spaces by different activities on the same *site* which are unable to comply with the *permitted activity* rules under TR-PARK.	
Controlled Activity	**Standards** 1. The *carpark* spaces must not be shared by different activities for parking at the same time.	**Matters of Control** 1. *Effects* on the *transport network* including safety *effects* and overspill carparking. 2. Layout of the *development.* 3. Public safety. 4. Hours of use of *carpark* spaces by each activity.
TR-PARK-R32	Any activity which is not a *permitted* or *controlled activity*.	
Discretionary Activity		

TR-Table - 7 - Transport Network Hierarchy	A *transport network hierarchy* differentiates between *roads* by function. *Roads* at the top of the hierarchy are generally arterial routes that cater for through traffic, including freight and often have higher traffic volumes and speeds. *Roads* at the lower end of the hierarchy tend to have a local access function with lower traffic volumes or speeds. *Roads* identified as *Strategic Arterial Routes*, *Major Community Connector*

Routes, *Centres Routes*, and Local Community Connector Routes and Neighbourhood Access Routes are listed in TR-Table 7 of this chapter. All other *roads* are Local *Roads*.

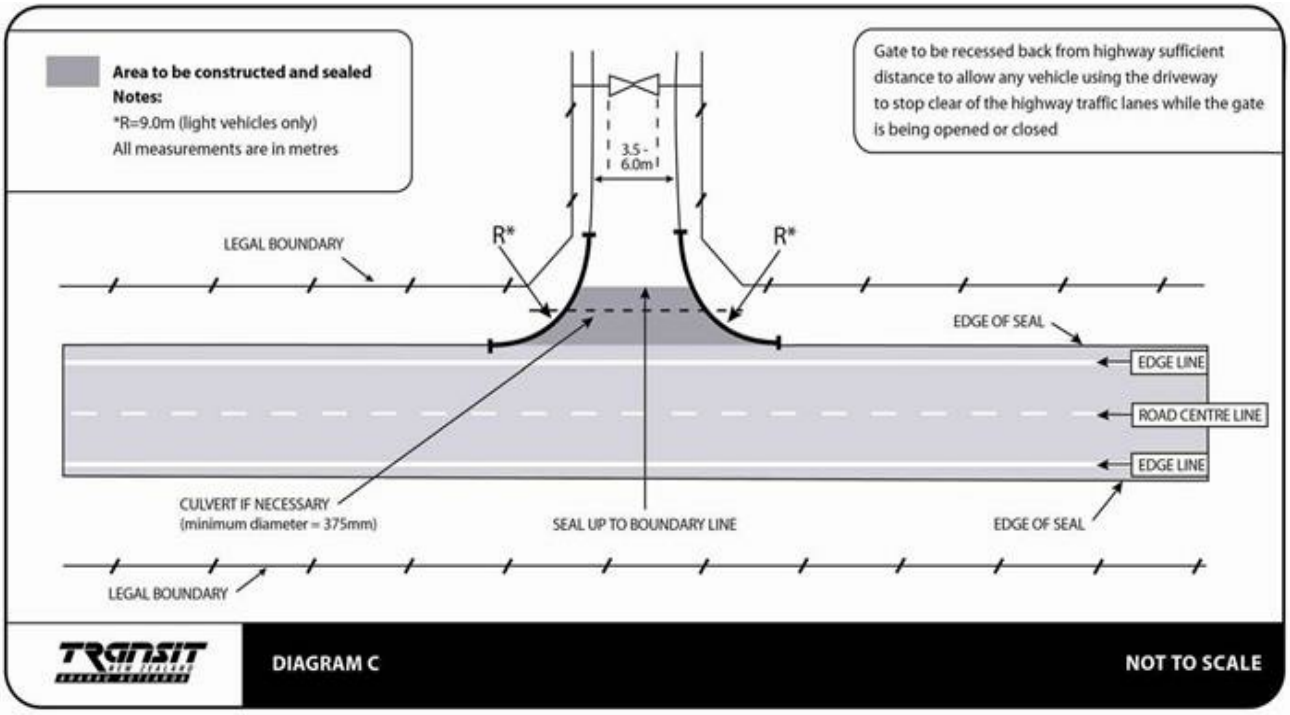
To promote network efficiency, *roads* should ideally connect into *roads* at the same level or one level above or below in the hierarchy. This ensures that each *road* performs the function for which it is designed, that intersections operate safely, and that through traffic and local traffic are separated and managed to minimise conflict. The use of a *transport network hierarchy* contributes to *road* safety by reducing turning movements onto and from high speed *roads* and also aids the planning of safe and efficient bus, cycling and walking routes.

Type of *Road*	Description
Strategic Arterial Routes	• Provides access through District • Provides some local access to *Centres* • Includes SH1 • Arterial *roads* which are not covered in NZ4404:2010 (Land Development and Subdivision Infrastructure) • Generally no on-street parking
Major Community Connector Routes	• *Roads* joining significant *centres* of population and/or sometimes providing for national and inter-regional traffic flow. These may include strategic arterials. • Connects suburbs and/or major transport nodes • May include access to regionally significant destinations • Major entry point from highway to the Coast; • Can be higher speed than local/*centres* streets but likely to be 70km or less - case by case consideration; • Some *roads* will have major traffic volumes; • On-street parking may be discouraged in some areas.
Centres Route (may be lane, local *road*, connector/collector, as noted in Table 3.2 NZS4404 - Land Development and Subdivision Infrastructure	*Roads* joining smaller *centres* of population, joining larger *centres* of population to nearby major connectors or linking between major connectors, and: • recognises specialist role of streets in retail areas and *centres*; • must be capable of delivering on-street retail parking; • must be capable of handling significant pedestrian cross movement; • must be capable of handling freight traffic; • will have high traffic volumes; • likely to have low traffic speeds, but case by case consideration.

	Local Community Connector Routes (NZS4404 - Land Development and Subdivision Infrastructure)	• Larger urban *roads* linking local *roads* to the connector network. • In rural areas, includes minor *roads* linking smaller rural communities to the connector network; • provides main access routes though suburbs; • connect local *centres*; • traffic movements mainly locally generated; • significant walkways/cycleways between local *centres*, schools and employment areas; • may be some routes with relatively high traffic volumes; • expect moderate speed.

	Neighbourhood Access Route	*Roads* providing direct access for residential and other areas of *development* in urban areas, with more than on intersection to other local or collector *roads*, and:
		• provides access to:
		  ◦ local residential neighbourhoods;
		  ◦ schools;
		  ◦ reserves.
		• can include local walkways, *beach* access, residential lanes;
		• will be low speed;
		• will have low traffic volume.

TR-Diagram 1 - Diagram C - Private access design standards diagram



Source: NZTA Planning Policy Manual Version 1, August 2007

TR-Diagram 2 - Access to *property* for parking and *loading* - FIGURE C1 of AS/NZS 2890.1:2004 GROUND CLEARANCE TEMPLATES

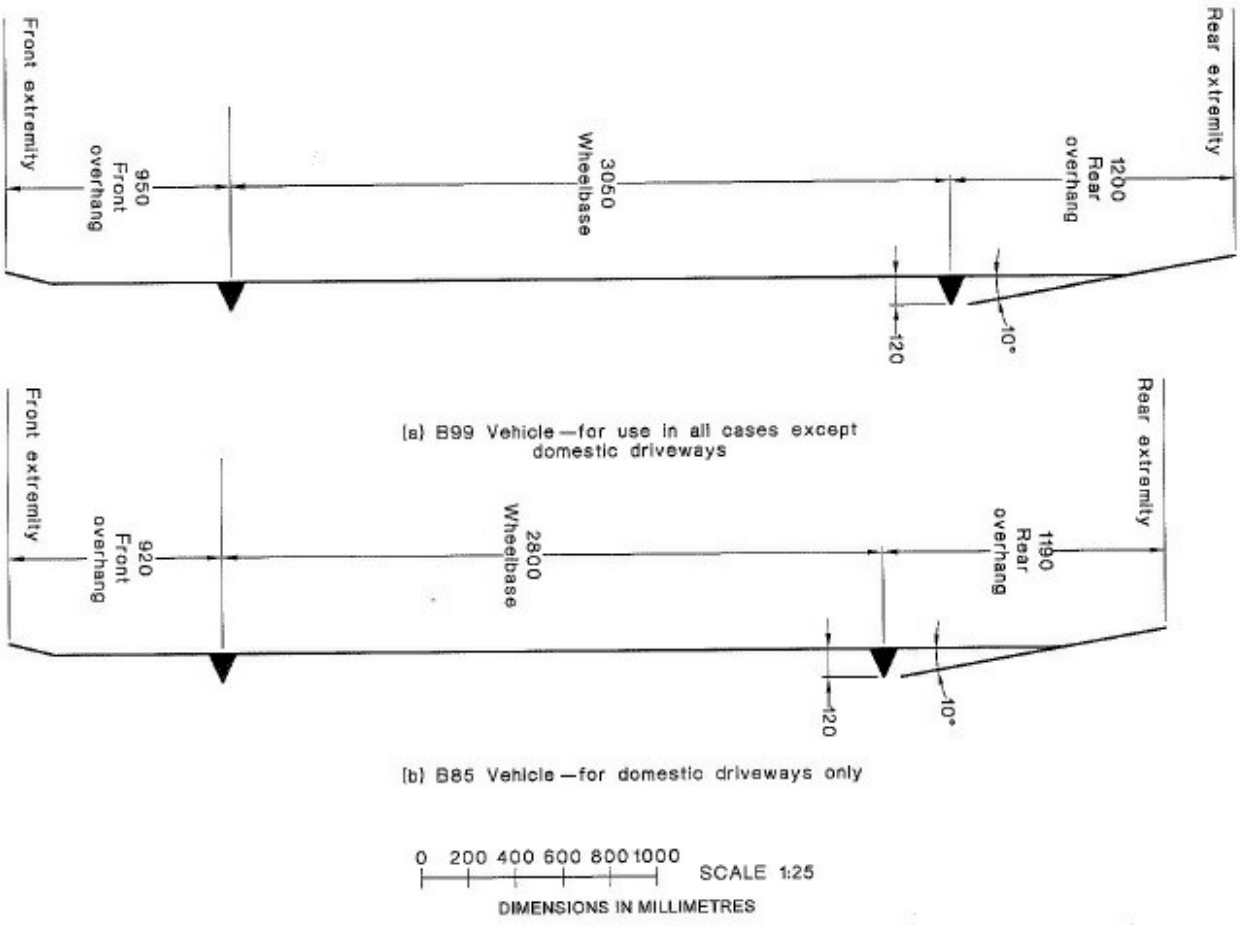
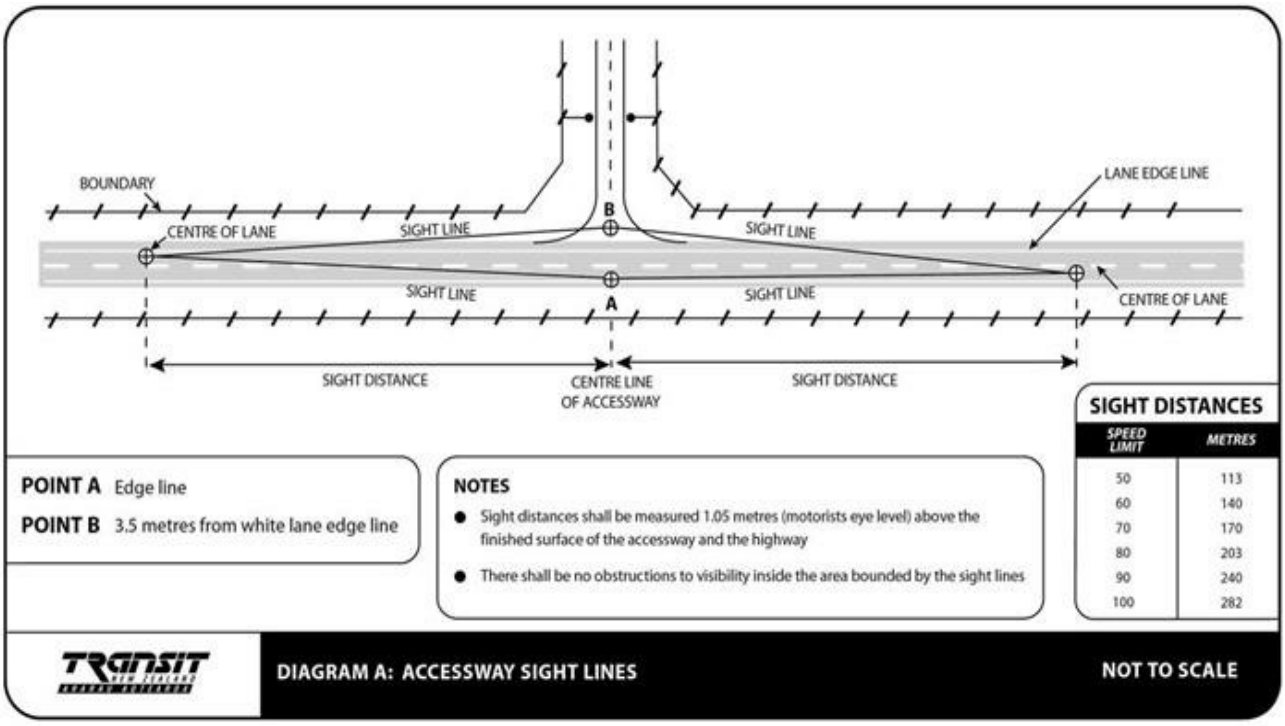


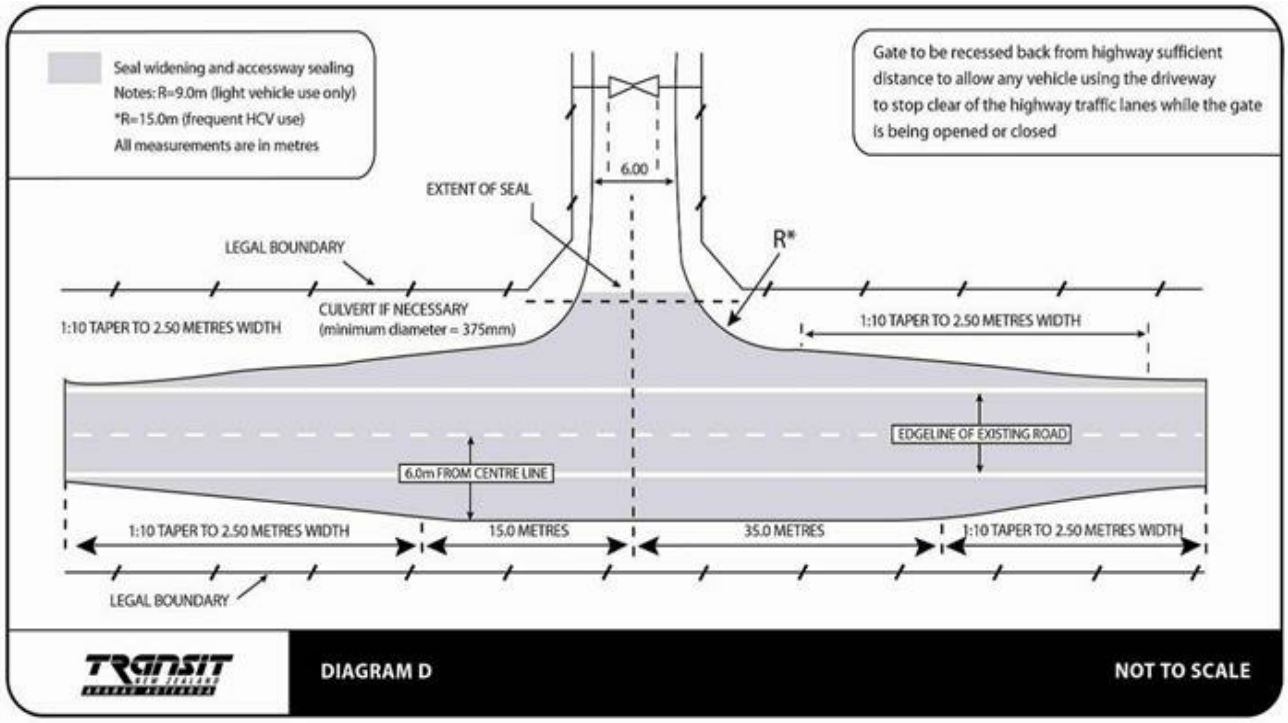
FIGURE C1 GROUND CLEARANCE TEMPLATES

TR-Diagram 3 - Diagram A: Sight distance measurement diagram



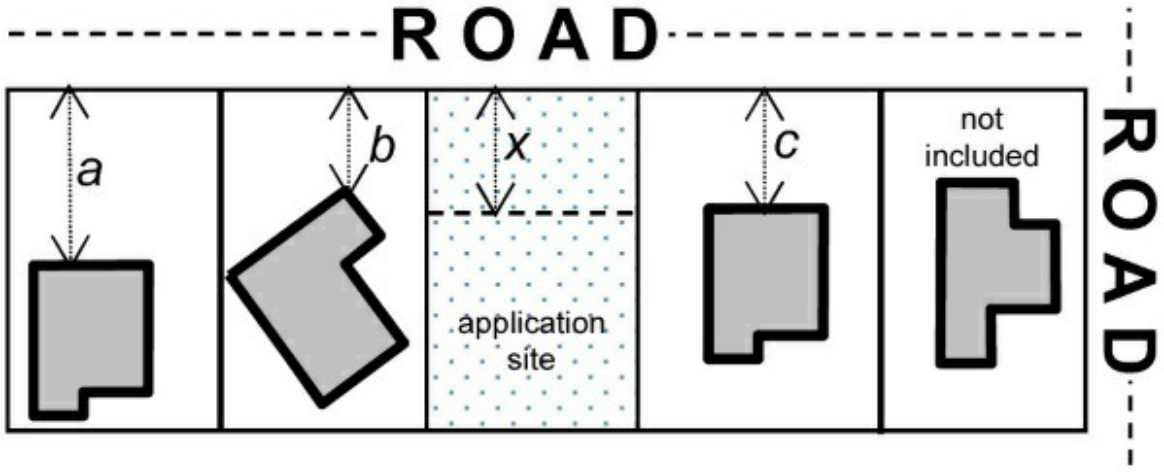
Source: NZTA Planning Policy Manual Version 1, August 2007

TR-Diagram 4 - Diagram D - Private access design standards diagram for heavy vehicles

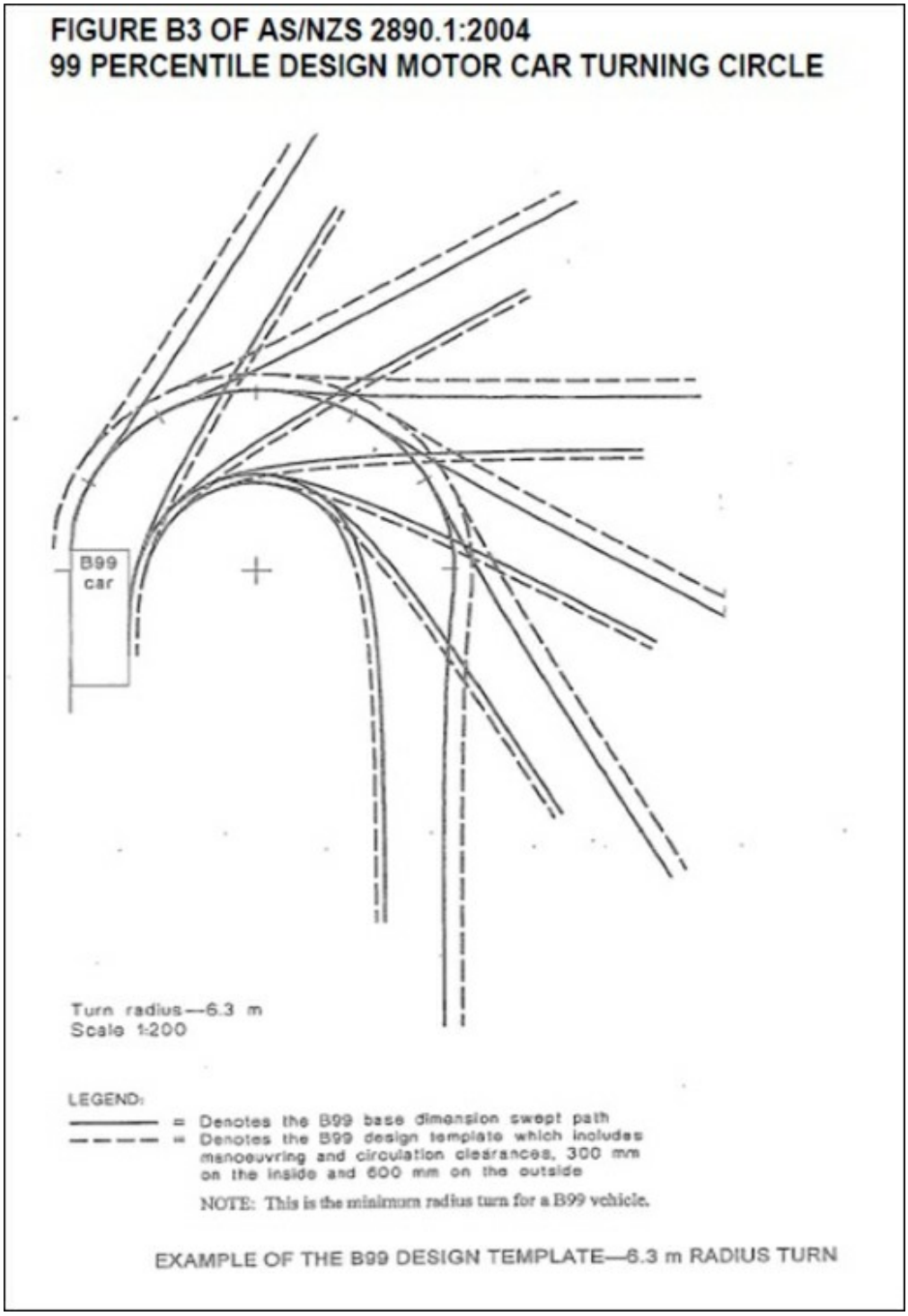


Source: NZTA Planning Policy Manual Version 1, August 2007

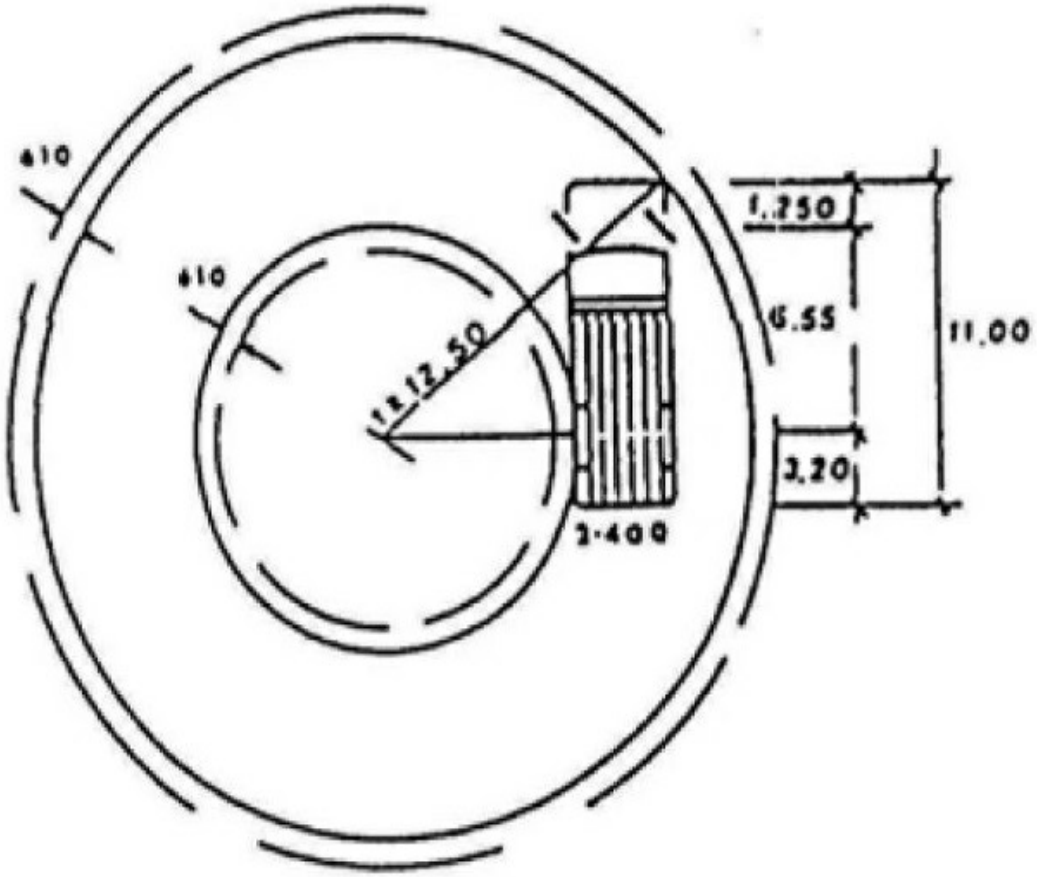
TR-Diagram 5 - 85 Percentile design motor car turning circle (figure B5 of AS/NZ 2890.1.2004)



TR-Diagram 6 - 99 Percentile design motor car turning circle (figure B3 of AS/NZ 2890.1.2004)

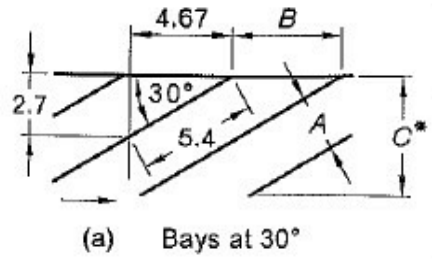


TR-Diagram 7 - 90 Percentile design two axled truck turning circle



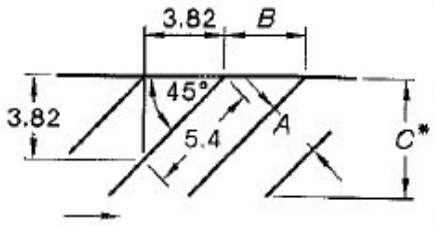
90 PERCENTILE DESIGN TWO AXLED TRUCK

TR-Diagram 8 - *Car parking* dimension standards- FIGURE 2.2 FROM AS/NZS 2890.1:2004



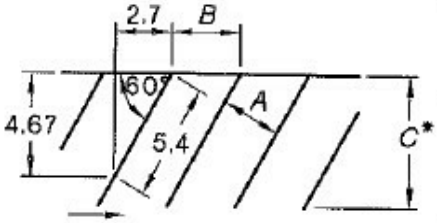
(a) Bays at 30°

User class (Note 1)	A (Notes 2 & 3)	B	C_1	C_2	C_3	Aisle width
1,1A	2.1	4.2	4.4	4.1	4.5	3.1
2	2.3	4.6	4.4	4.1	4.7	3.0
3	2.5	5.0	4.4	4.1	4.9	2.9
3A	2.5	5.0	4.4	4.1	4.9	3.45



(b) Bays at 45°

User class (Note 1)	A (Note 3)	B	C_1	C_2	C_3	Aisle width
1,1A	2.4	3.4	5.2	4.8	5.5	3.9
2	2.5	3.5	5.2	4.8	5.6	3.7
3	2.6	3.7	5.2	4.8	5.7	3.5
3A	2.6	3.7	5.2	4.8	5.7	4.2
4	(See Note 5)					



(c) Bays at 60°

User class (Note 1)	A (Note 3)	B	C_1	C_2	C_3	Aisle width
1,1A	2.4	2.75	5.7	5.1	5.9	4.9
2	2.5	2.90	5.7	5.1	6.0	4.6
3	2.6	3.00	5.7	5.1	6.0	4.3
3A	2.6	3.00	5.7	5.1	6.0	5.1
4	(See Note 5)					

(d) Bays at 90°

User class (Note 1)	A (Note 3)	B	C_1	C_2	C_3	Aisle width (Note 4)
1	2.4	2.4	5.4	4.8	5.4	6.2
1A	2.4	2.4	5.4	4.8	5.4	5.8
2	2.5	2.5	5.4	4.8	5.4	5.8
3	2.6	2.6	5.4	4.8	5.4	5.8
3A	2.6	2.6	5.4	4.8	5.4	6.6
3A	2.7	2.7	5.4	4.8	5.4	6.2
4	(See Note 5)					

*Dimension C is selected as follows (see Note 6):
C1—where parking is to a wall or high kerb not allowing any overhang.
C2—where parking is to a low kerb which allows 600 mm overhang in accordance with Clause 2.4.1(a)(i).
C3—where parking is controlled by wheelstops installed at right angles to the direction of parking, or where the ends of parking spaces form a sawtooth pattern, e.g. as shown in the upper half of Figure 2.4(b).

Notes to TR-Diagram 8 - Dimensions in metres

NOTES TO FIGURE 2.2:

1. User class is defined in Table 1.1. The two Class 3A options given for 90 degree parking are alternatives of equal standing.
2. 30 degree parking spaces can be made narrower than spaces at other angles because of the reduced chance of open doors hitting adjacent vehicles.
3. The design envelope around each parking space, to be kept clear of obstructions, is shown in Figure 5.2.
4. Dimensions for 90 degree parking aisles are for two-way aisles. These dimensions are required to

be observed even through one-way movement along aisles is imposed for other purposes, see Clause 2.3.2(a).

5. Space dimensions for User Class 4 spaces (for people with disabilities) are specified in AS/NZS 2890.6*. Aisle widths shall be the same as applicable to adjacent other user spaces or in the absence of such spaces, 5.8 m minimum.
6. The values for dimension *C* have been calculated as follows:

$C_1 = 5.4 \sin \theta + 1.9 \cos \theta$
$C_2 = C_1 - 0.6 \sin \theta$
$C_3 = C_1 + (A - 1.9) \cos \theta$

where

θ = parking angle
A = space width, in metres

TR-Diagram 9 – Level Crossing Sight Triangles and Explanations

***Developments* near Existing Level Crossings**
It is important to maintain clear visibility around level crossings to reduce the risk of collisions. All the *conditions* set out in this standard apply during both the construction and operation stages of any *development.*

Approach sight triangles at level crossings with Stop or Give Way *signs*
On sites adjoin a rail level crossings controlled by Stop or Give Way *Signs*, no *building*, *structure* or planting shall be located within the shaded areas shown in Figure 1. These are defined by a sight triangle taken 30 metres from the outside rail and 320 metres along the railway track.

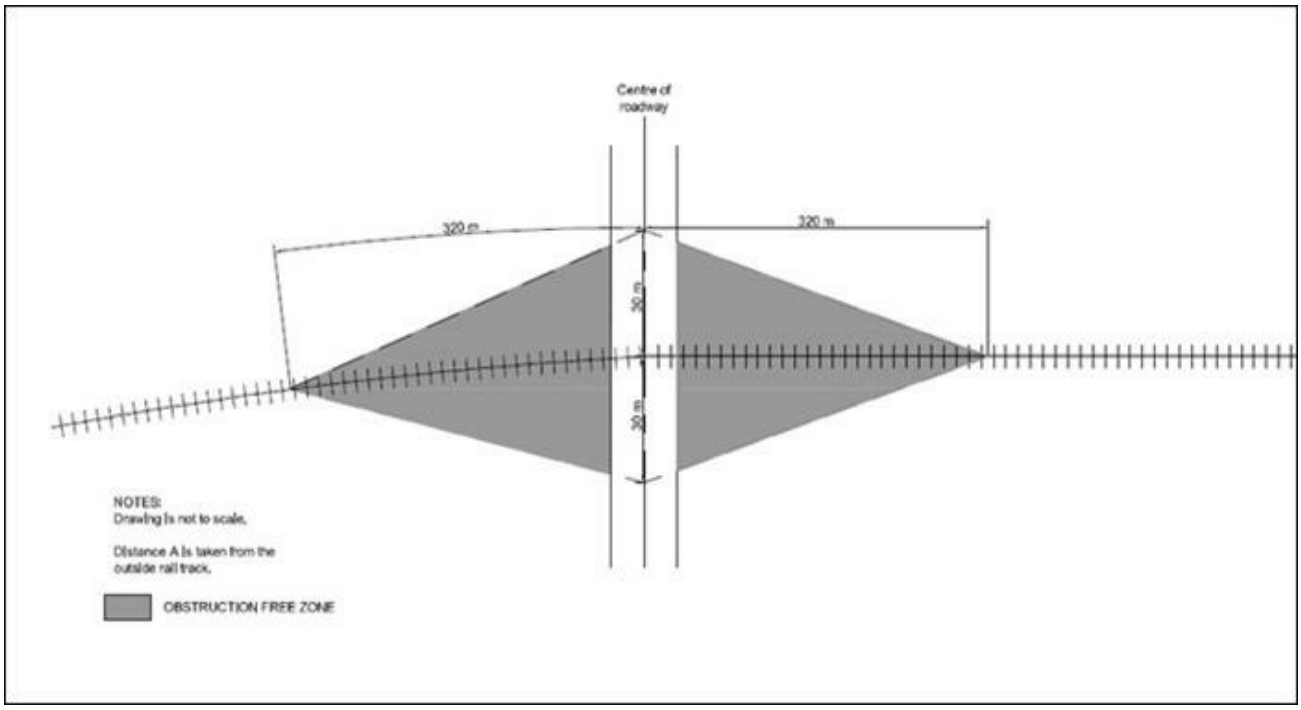


Figure 1: Approach Sight Triangles for Level Crossings with "Stop" or "Give Way" *Signs*

Advice Note:
The approach sight triangles ensure that clear visibility is achieved around rail level crossings with Stop or Give Way *signs* so that a driver approaching a rail level can either:

1. See a train and stop before the crossing; or
2. Continue at the approach speed and cross the level crossing safely.

These *conditions* apply irrespective of whether any visual obstructions already exist.

No approach sight triangles apply for level crossings fitted with alarms and/or barrier arms. However, care should be taken to avoid *developments* that have the potential to obscure visibility of these alarm masts. This is particularly important where there is a curve in the *road* on the approach to the level crossing, or where the *property boundary* is close to the edge of the *road* surface and there is the potential for vegetation growth.

Restart sight triangles at level crossings

On *properties* adjoining all rail level crossings, no *building, structure* or planting shall be located within the shaded areas shown in Figure 2. These are defined by a sight triangle taken 5 metres from the outside rail and distance A along the railway track. Distance A depends on the type of control (Table 1).

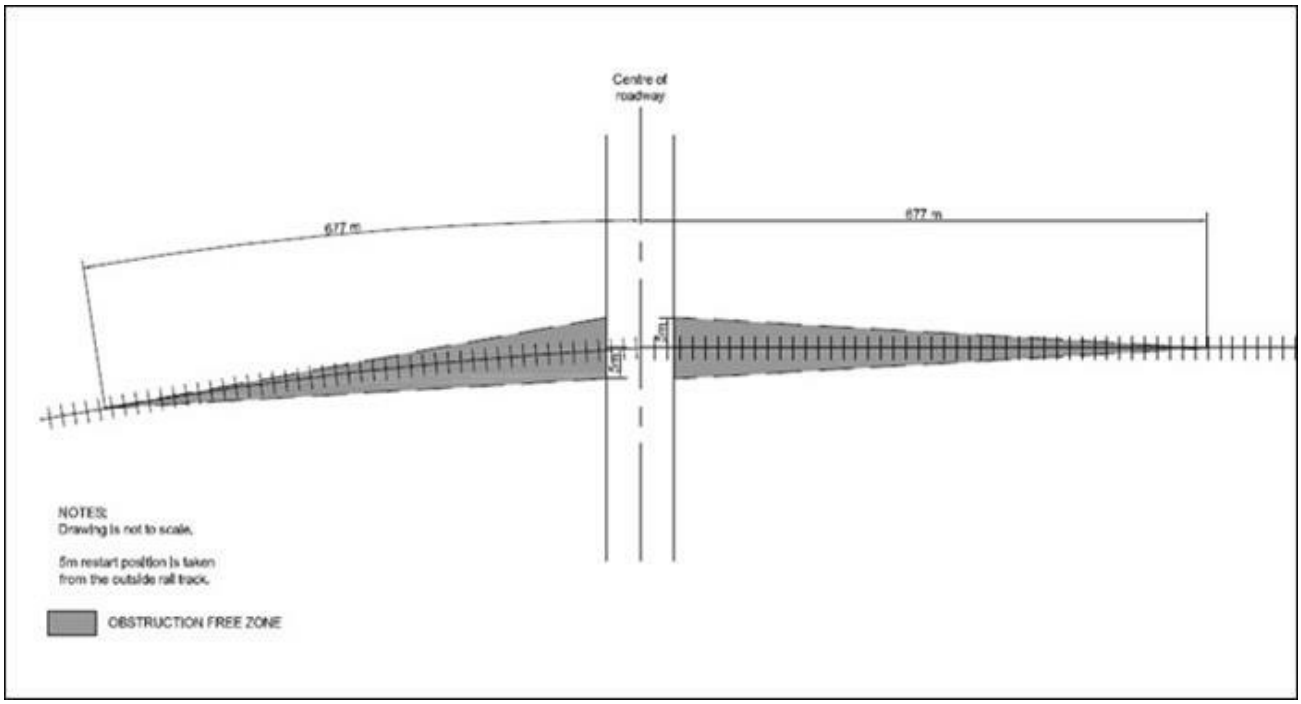


Figure 2: Restart Sight Triangles for all Level Crossings

Table 1: Required Restart Sight Distances For Figure 2

Required approach visibility along tracks A (m)		
Signs only	Alarms only	Alarms and barriers
677 m	677 m	60 m

Additional requirements:

1. Figures 1 and 2 show a single set of rail tracks only. For each additional set of tracks add 25 m to the along-track distance in Figure 1, and 50 m to the along-track distance in Figure 2.

2. All figures are based on the sighting distance formula used in NZTA Traffic Control Devices Manual 2008, Part 9 Level Crossings. The formulae in this document are performance based; however the rule contains fixed parameters to enable easy application of the standard. Approach and restart distances are derived from a:

- train speed of 110 km/h
- vehicle approach speed of 20 km/h
- fall of 8 % on the approach to the level crossing and a rise of 8 % at the level crossing
- 25 m design truck length
- 90° angle between road and rail

Advice Note:
The restart sight line triangles ensure that a *road* vehicle driver stopped at a level crossing can see far enough along the railway to be able to start off, cross and clear the level crossing safely before the arrival of any previously unseen train.
These *conditions* apply irrespective of whether any visual obstructions already exist.