

SECTION 20: LAND TRANSPORT

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20. LAND TRANSPORT

20.1 Introduction

An essential part of the functioning of any City, be it the urban or rural area, is the land transportation system. The most obvious element of that system is the roading system, which is used daily to move goods and people around the City and which also provides a valuable parking resource in most areas. Other parts of the land transport system within the City include the North Island Main Trunk Railway (NIMTR), the Palmerston North-Gisborne Line, which carries both passengers and freight and the Palmerston North Airport at Milson, provision for cyclists and pedestrians and the public transport network, including services and infrastructure.

The railway network comprising the railway lines and adjoining land required for their operation are covered by a series of designations. Rail operations give rise to a few effects, the most obvious of which are noise and vibration, but these effects are usually of limited duration or impact. In instances where rail activities occur beyond the boundary of the designation or are not in accordance with the designated purpose, the District Plan rules and resource consents will ensure that potential effects on amenity are avoided, remedied or mitigated. Development will also be managed to avoid incompatible subdivision and development and reverse sensitivity effects for existing rail activities in the City.

The roading network is an important element to the City's position as a distribution centre for the lower North Island. The City's geographical position and excellent transport networks have, over the last decade, assisted in developing a number of large warehousing and distribution ventures such as the Woolworths Distribution Centre and Toyota's National Service Centre. Thus, the transport infrastructure as a physical resource, contributes to and is an integral part of the use and development of all other resources within the City.

The City's roading system is the most dominant feature of the City's land transport infrastructure. Roads provide for the safe and efficient movement of people and goods and cannot be treated in planning terms in isolation from the communities which they serve. The State Highway networks within the City represent a significant investment which provides the primary link with the national highway network. Thus, the District Plan has a role to play in ensuring that roads can effectively perform a range of functions such as the movement of goods and people, property access and the provision of parking and maneuvering space. Equally the Plan also has a role to play in assessing the effects which other activities might have on the use and operation of the roading resource, and in avoiding, mitigating or remedying those effects. Public transport, walking and cycling both provide environmentally appropriate forms of transport, and clearly in terms of the sustainable management of the urban form, they need to be encouraged.

Overall, the maintenance of a safe, effective and efficient transport system is an integral part of ensuring that the City operates in a sustainable manner.

20.2 Resource Management Issues

The following resource management issues were identified in regard to Land Transport:

1. The importance of maintaining and developing the land transport network so that

it meets the needs of the City, including providing for:

- a. The integration of new and extended infrastructure within the existing land transport network in the City;
 - b. Vehicle parking facilities that are designed to be functional and attractive and located in the City in areas where they are accessible;
 - c. Facilities for pedestrians and cyclists that are safe, attractive to use and accessible; and
 - d. Meeting the City's future transportation needs.
2. The need to manage the adverse effects of the construction, maintenance and operation of transport infrastructure and transport activities on the environment and the community so that the health, wellbeing and safety of people and communities, and the amenity and character of the environment is maintained.
 3. The need to control and manage the effects of land use and development on the land transport network, including at uncontrolled vehicle access crossing points, level crossings and intersections on traffic safety and the efficient function of major and minor arterial roads, so as to ensure the land transport system can function and operate safely, effectively and efficiently.
 4. The effects of land use and development and on regional strategic roads and the arterial road network, particularly uncontrolled vehicle access crossing points and intersections on traffic safety and the efficient functioning of major and minor arterial roads.

Explanation

Land transport issues fall into three broad categories: the need to maintain and develop the land transport network; the effects of the land transport system on the environment; and the effects of the development and use of land on land transport. These are reflected in Issues 1 – 3 above. They also reflect the diverse nature of transportation, largely reflecting the role of transport in allowing or assisting in the operation of other activities. However, while a safe and efficiently operating transport network can do much to assist in ensuring that activities within the City operate in a sustainable manner, transport modes, in this case roads and railway do have effects on other activities and on the environment.

The Regional Land Transport Strategy sets out the strategic direction, planning and development priorities for transport in the Manawatu-Wanganui Region for the next 30 years. Council is required to implement the directives encapsulated in the Regional Land Transport Strategy and update their plans and strategies, accordingly. This Strategy identifies a Regional Strategic Road Network and an outline work programme to advance intra and inter-regional accessibility and links to national roading corridors, consistent with the Council's long term growth plans and regional economic development goals. Relevantly, the Kairanga Bunnythorpe Road and Ashhurst Bunnythorpe Road have been identified as new inter-regional routes and Railway Road has been classified as a major arterial route. The City Roding Hierarchy is updated to align with the Regional Land Transport Strategy (2010-2040). Access controls apply to arterial and collector roads to minimise reverse sensitivity effects and protect the efficient operation of the City's arterial road network.

20.3 Objectives and Policies

20.3.1 OBJECTIVES AND POLICIES

OBJECTIVE 1

The City's land transport networks are maintained and developed to ensure that people and goods move safely and efficiently through and within the City.

POLICIES

- 1.1 Identify and apply the roading hierarchy to ensure the function of each road in

the City is recognized and protected in the management of land use, development and the subdivision of land.

- 1.2 All roads in the City have function and design characteristics consistent with their place in the roading hierarchy.
- 1.3 Maintain and upgrade the existing roads in the City and provide for new roads to meet the current and future needs of the City.
- 1.4 The road network stormwater control system shall protect the road, road users and adjoining land from the adverse effects of water from roads and minimise any adverse effect on the environment.
- 1.5 Require all new public roads, private roads and vehicle accesses to be designed and constructed to meet performance standards relating to the safety and efficiency of vehicle movement, and to ensure the safe use of the road transport network for all users, particularly in respect of:
 - (a) Road width and alignment which should be sufficient for two vehicle lanes except where traffic volumes are insufficient;
 - (b) The formation and surface sealing of all roads and vehicle accesses to standards appropriate to the volume of traffic expected to be carried;
 - (c) Provision for necessary network utility facilities within roads; and
 - (d) Safe design and construction of roads, road access points and intersections, including alignment, gradient, vehicle parking, manoeuvring and turning requirements.
- 1.6 Encourage the development of safe and accessible pedestrian paths and cycleways, as well as convenient and accessible cycle parking, to support the opportunity for people to use active and non-vehicular modes of transport throughout the City.
- 1.7 To support and encourage the provision of public transport and its use throughout the City as an integral part of the transportation system.
- 1.8 Convenient, safe and accessible car parking, loading and manoeuvring facilities are available for residents, staff, visitors and customers for all activities without creating congestion or conflicts with moving vehicles, pedestrians or cyclists on adjacent roads.

OBJECTIVE 2

The land transport network is safe, convenient and efficient while avoiding, remedying or mitigating adverse effects in a way that maintains the health and safety of people and communities, and the amenity values and character of the City's environment.

POLICIES

- 2.1 To restrict the through movement of traffic where the movement has adverse visual, noise and safety effects on adjoining areas by using the roading hierarchy to direct higher volume and heavy traffic movements on identified arterial routes and discouraging this traffic from other areas, such as residential areas.
- 2.2 To avoid, remedy or mitigate the impact of roads and parking areas on visual amenity values of the community by requiring the provision of landscaping.
- 2.3 Ensure that the adverse effects of long term and commuter parking associated with activities in the business and industrial areas on the amenity values of

residential streets are mitigated.

- 2.4 Avoid adverse effects on amenity and character by ensuring that new roads are well designed and visually complement the character of the surrounding areas.

OBJECTIVE 3

The safety and efficiency of the land transport network is protected from the adverse effects of land use, development and subdivision activities.

POLICIES

- 3.1 Avoid, remedy or mitigate the adverse effects of increased traffic or changes in traffic type, which would compromise the safe and efficient operation of any road or level crossing, or the safe and convenient movement of pedestrians and cyclists on roads or at level crossings.
- 3.2 Require vehicle crossing places and vehicle entrances from public roads to be located, constructed, and maintained to standards appropriate to the expected traffic volume, pedestrian movement and speed environment of each road.
- 3.3 Ensure that buildings and activities do not compromise land transport network safety, including maintaining the necessary clear sight lines for road vehicles at level crossings and road intersections.
- 3.4 Ensure adequate on-site parking and manoeuvring space is provided for each type of activity in a safe and visually attractive manner.
- 3.5 Ensure that buildings and activities make provision for adequate and safe on-site loading.
- 3.6 Control the location, design and extent of advertising signs to ensure that they do not interfere with the safe and efficient use of land transport networks.

20.3.2 METHODS

- District Plan Rules
- Designations (any requiring authority as defined in the Resource Management Act 1991)
- The City Council's role as road owner under the Local Government Act 1974
- The National Land Transport Programme 2012-2015
- The Regional Land Transport Plan
- Other Plans, particularly the City Council's Annual Plan, Long Term Plan, District Land Transport Programme, and Integrated Parking Strategy
- Operational Activities of the City Council
- Educational initiatives and operational activities of the Manawatu-Wanganui Regional Council regarding public transport matters
- Responsibilities of New Zealand Transport Agency regarding State Highways
- Liaison between the Manawatu-Wanganui Regional Council and Palmerston North City Council to discuss transportation issues, for example, the Regional Transport Committee
- Education (for example, encouraging people to make provision for cycle parking).

20.4. Rules: Permitted Activities

R20.4.1 PERMITTED ACTIVITIES – RELATIONSHIP OF THE LAND TRANSPORT SECTION TO THE DISTRICT PLAN AS A WHOLE

The activities in Section 20 are Permitted Activities in all Zones of Palmerston North City provided that they comply with the Performance Standards in R20.4.2(a) to (h) below, except:

- (a) where the activity is provided for in R20.4.3; or
- (b) where the activity is listed as a Restricted Discretionary Activity in Section 20; or
- (c) is otherwise provided for in the relevant Zone rules.

R20.4.2 UNLESS OTHERWISE SPECIFIED AS A RESTRICTED DISCRETIONARY ACTIVITY, THE FOLLOWING ACTIVITIES ARE PERMITTED THROUGHOUT THE CITY PROVIDED THEY COMPLY WITH THE RELEVANT PERFORMANCE STANDARDS (A) – (H) BELOW:

- a. Roads vested in Council
- b. On site loading and vehicle parking spaces
- c. Bicycle parking spaces
- d. Vehicle crossings for property access
- e. Service lanes and onsite-vehicle-queuing facilities
- f. Landscaping of parking areas

R20.4.3 THE ESTABLISHMENT, OPERATION, MAINTENANCE AND MINOR UPGRADE OF ANY RAIL LINES, PREMISES OR INFRASTRUCTURE ARE PERMITTED ACTIVITIES THROUGHOUT THE CITY PROVIDED THESE COMPLY WITH THE PERFORMANCE STANDARDS IDENTIFIED UNDER R23.6.2. FOR THE AVOIDANCE OF DOUBT, THIS RULE ENABLES ACTIVITIES WHICH INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- Re-sleepering, re-railing, re-ballasting;
- Grouting or repairs to rock faces;
- Laying of new communications cables;
- Replacement of existing structures such as signal boxes;
- Installation of safety related signage and signals;
- Installation of bells and lights and/or half arm barriers at level crossings; and
- The re-arrangement of the depot facility in Palmerston North, including the CT site.

PERFORMANCE STANDARDS FOR PERMITTED ACTIVITIES UNDER R20.4.2

(a) Vehicle Access

(i) Pedestrian Streets

No vehicle access is permitted across Pedestrian Streets.

(ii) State Highways

Any part of a road which forms part of the State Highway network is subject to the requirements of the New Zealand Transport Agency as the road controlling authority.

(iii) Limited Access Roads (non State Highways)

Any part of a road which is a Limited Access Road in Appendix 20.7 is subject to the requirements of the Palmerston North City Council as the road controlling authority.

(iv) Cashmere Drive

Provided that, for the purposes of any development of land on Cashmere Drive which is a vacant section at 1 July 2012, Cashmere Drive will be regarded as a local road.

Note to Plan Users:

1. Where there is more than one Road Controlling Authority, permissions will be required from the respective Road Controlling Authorities.
2. A Vehicle Crossing Application is required for every crossing to authorize a vehicle crossing place/access to the road network. A Vehicle Crossing Application is approved by the Council's Roading Manager, as Road Controlling Authority. A Vehicle Crossing Application Form can be obtained from Council's Building Services.
3. Where a Vehicle Crossing Application is for a Limited Access Road, as listed in Appendix 20.7, approval will be required from the NZTA.

(v) Railway Lines

The following restrictions apply to vehicle accesses in the vicinity of railway lines:

- a) No new road or access shall cross a railway line;
- b) Any new vehicle access or intersection, or any additional development that intensifies the use of an existing access or intersection, shall be located a minimum of 30m from a rail crossing limit line; and
- c) Any new development near an existing railway level crossing with passive control, that is a crossing without flashing lights, bells, barrier arms or gates, must be located outside of the sight triangles as set out in Appendix B of NZTA Traffic Control Devices Manual 2008, Part 9 Level Crossings.

(vi) Number of Vehicle Crossings, Locations and Sight Distances

- a) The maximum number of vehicle crossings per site shall be 1 per 30m of total frontage, with a maximum of two accesses per site in the Rural Zone and for sites fronting Major or Minor Arterials, and a maximum of three for all other sites.
- b) Where a site has frontage onto both an arterial and non-arterial road frontage, any vehicle access shall be from the secondary road frontage.

- c) Where vehicle access can be provided from a service lane or right-of-way registered in favour of the site or other private road or private right-of-way, no vehicle access shall be from the street.
- d) Vehicle crossings to a frontage road with a speed limit of 70km/h or greater shall have a minimum spacing to an adjacent crossing on the same side of the frontage road, on the same or an adjacent site (measurement (c) in Appendix 20E), as follows:

Posted Speed (km/h)	Minimum distance(m) between successive accesses ((c) in Fig 20.C)		
	Major or Minor Arterial	Collector Road	Local Road
70	40	40	40
80	100	70	50
90	200	85	65
100	200	105	80

- e) Any part of a vehicle crossing shall not be closer to the intersection of any roads (distance (a) and/or (b) in Appendix 20E) than as follows:

Posted Speed (km/h)	Frontage Road	Intersecting Road	
		Major or Minor Arterial or Collector Road	Local Road
<70	Major or Minor Arterial	30	30
<70	Collector or Local Road	20	10
70-90	Major or Minor Arterial	100	100
70-90	Collector or Local Road	45	45
>90	Major or Minor Arterial	200	200
>90	Collector or Local Road	60	60

- f) Minimum sight distances at accesses measured in accordance with Appendix 20F shall be as follows:

Posted Speed (km/h)	Major & Minor Arterials	Collector Road	Local Road	Residential Access to Local Road
40	90	85	55	30
50	115	110	70	40
60	145	135	85	55
70	175	165	95	70
80	210	195	110	95
90	245	230	130	130
100	280	265	160	160

- g) Required sight distances are to be available over their full length.

- h) Where a vehicle access crosses a footpath, pedestrian visibility splays in the form of sight triangles shall be provided on each side of the access. The sight triangles shall be kept clear of obstructions to visibility, planting to be kept below 500mm, and shall measure 2m along the property boundary to each side of the access and 2.5m along the access into the property. Residential developments of three or less dwelling units with access onto a Local Road are exempt from this requirement.
- i) Any access to a parking area with more than six spaces or serving two or more dwelling units shall be maintained, built and retained for its intended purpose so as to ensure that vehicles are not required to reverse either on or off a public road.
- j) Accesses that provide access to loading spaces from Major or Minor Arterials or Collector Roads shall be designed so that it is not necessary to reverse vehicles either on to or off the street, and do not require vehicles to cross into or from opposing traffic lane.

(vii) All vehicle accesses are to be formed in a permanent, dust-free (not metal except permitted activities in the Rural Zone) surface.

(viii) All vehicle accesses shall comply with the following width, passing and queuing standards:

	Length (m)	Minimum Legal Width(m)	Formed Width (m)	Pedestrian Provision	Passing Provision	On-site Queuing Length at Entry
Residential Units in All Zones						
1	≤40	3.0	2.75-5.0	Shared in movement lane	Only if formed width less than 5m and forward sightline restricted	Not needed
2-3	≤40	3.5	2.75-5.0	Shared in movement lane	Only if formed width less than 5m and forward sightline restricted	Not needed
4-6	≤80	5.0	2.75-6.0	Shared in movement lane	If formed width less than 5m and forward sightline restricted and/or longer than 50m	If formed width less than 5m then 6m queuing length if connecting to Major or Minor Arterial
7-20	≤100	6	2.75-6.0	If ≥10 units separate 1.5m wide footpath	If formed width less than 5m and forward sightline restricted and/or longer than 50m	If formed width less than 5m then 6m queuing length if connecting to a Collector or Local Road and 12m if connecting with a Major or Minor Arterial

	Length (m)	Minimum Legal Width(m)	Formed Width (m)	Pedestrian Provision	Passing Provision	On-site Queuing Length at Entry
7-20	>100	9	5.5-6.0	If ≥10 units separate 1.5m wide footpath	Not needed as two-way traffic flow	Not needed as two-way traffic flow. No access to on-site parking for 6m into the site.
Non-residential Activities in the Rural Zone (number of lots)						
1		5.0	3.5-6.5	Shared in movement lane	Only if formed width less than 5m and forward sightline restricted	Not needed
2-4		6.0	5.5-6.5	Shared in movement lane	Not needed as two-way traffic flow	Not needed as two-way traffic flow
All Other Activities (number of parking spaces)						
1-4		3.6	2.75-5.0	Shared in movement lane	Only if formed width less than 5m and forward sightline restricted	Not needed
5-15		6	2.75-6.0	Shared in movement lane	If formed width less than 5m and forward sightline restricted and/or longer than 50m	If formed width less than 5m then 6m queuing length if connecting to a Collector or Local Road and 12m if connecting with a Major or Minor Arterial
>15		9	5.5-6.0	Separate 1.5m wide footpath	Not needed as two-way traffic flow	Not needed as two-way traffic flow. No access to on-site parking for 6m into the site.

- a) Exceptions to these standards include the provision of a clear width of at least 3.5m with a 4m height clearance in situations where Performance Standard (a)(xii) and that formed widths of 4.0 to 4.9m should not be used to avoid confusion regarding one-way or two-way use of the access.
- b) Passing areas should be at least 5.5m wide and as long as needed to accommodate the vehicle types using the access. Passing areas can be provided informally in areas where there is widening to accommodate a driveway or formally through the inclusion of passing bays.
- c) The required queuing space shall not be used for turning to or from parking spaces.

- d) In addition to the queuing provisions included in the Table, access must be designed so that vehicles using or waiting to use fuel dispensers, ticket vending machines, remote ordering facilities and devices, entrance control mechanisms, or other drive-through facility do not queue into the adjoining road reserve or obstruct entry or exit from the site.

(ix) All vehicle accesses shall comply with the following gradient requirements:

Length (m)	Gradient
Straight Ramps – Staff Only Access or Residential Activities	
Up to 20m*	1 in 4 (25%)
More than 20m	1 in 5 (20%)
Straight Ramps – All Other Accesses	
Up to 20m	1 in 5 (20%)
More than 20m	1 in 6 (16.7%)
Curved Ramps	
Shall be designed in accordance with AS/NZS 2890.1 2004	Shall be designed in accordance with AS/NZS 2890.1 2004

For access to 1 or 2 car parks the maximum gradient can be 1 in 4 (25%) for any length.

- a) The maximum change in gradient without a transition shall be no greater than 1 in 8 (12.5%).
- b) Where transition grades are needed, they should be a minimum of 2m long.
- c) Where a vehicle access crosses a footpath to access a frontage road, the gradient of the first 4m from the back of the footpath shall be no more than 1 in 20 (5%) for residential activities and for at least 6m for all other activities.

(x) Design for vehicle crossings onto roads in the Rural Zone with speed limits of 70km/h or greater shall comply with the relevant figures in the table below:

Heavy vehicle movements per week	Volume of traffic using the vehicle crossing per day	Is the vehicle crossing located on a state highway?	Which Appendix to use for vehicle crossing design
≤1	1-30	No	Appendix 20G
≤1	1-30	Yes	Appendix 20H
≤1	31-100	Yes or No	Appendix 20I
>1	1-30	Yes or No	Appendix 20H
>1	31-100	Yes or No	Appendix 20I

(xi) Vehicle Crossing Movements

In the Rural Zone, Vehicle crossing movements must not exceed 100 Car-equivalent Vehicle Movements per day and the Car-equivalent Vehicle Movements shall be calculated in accordance with the calculation of Car-equivalent Vehicle Movements, below.

Calculation of Car-equivalent Vehicle Movements

- a. Car-equivalent Vehicle Movements
- i. One car to and from the site = 2 Car-equivalent Vehicle Movements
 - ii. One truck to and from the site = 6 Car-equivalent Vehicle Movements

- iii. One truck and trailer to and from the site = 10 Car-equivalent Vehicle Movements
- iv. One dwelling is deemed to generate 8 Car-equivalent Vehicle Movements.
- b. The number of Car-equivalent Vehicle Movements will be deemed to be less than 30 if they exceed 30 on no more than two days per week, provided that they do not exceed 60 on any given day.
- c. The number of Car-equivalent Vehicle Movements will be deemed to be less than 100 if they exceed 100 on no more than two days per week, provided that they do not exceed 200 on any given day.

Explanation

The traffic generated by some activities in the Rural Zone have the potential to impact on the traffic efficiency and safety of the adjoining Major and Minor Arterial roads, for example activities like Massey University farm-based teaching and research facilities. This control ensures that the adverse effects of vehicle movements associated with existing or new land uses are avoided, remedied or mitigated, where they exceed a defined volume, and reflective of the modal characteristics of the vehicular traffic.

(xii) For the purposes of firefighting where a building is either:

- a) Located in an area where no fully reticulated water supply system is available; or
- b) Located further than 75m from the nearest road that has a fully reticulated water supply system including hydrants (as required by NZS 4509: 2008)

Vehicle accesses shall have, in addition to the standards included in performance standard (a)(i)-(x):

- (i) A minimum formed width of 3.5m and;
- (ii) A height clearance of 4m;
- (iii) Maximum gradient of 1 in 5 with minimum grade transition lengths of 4m for changes of grade of 1 in 8 (12.5%) or more; and
- (iv) Be free of obstacles that could hinder emergency access.

(b) Parking

(i) Parking Spaces for People with Disabilities

Where on-site parking is provided parking spaces for the disabled will be provided as follows:

- (a) Number
 - (i) One where 20 or less spaces are provided.
 - (ii) Two where between 21 and 50 spaces are provided plus
 - (iii) One for every additional 50 spaces (or part thereof) where more than 50 spaces are provided.
 - (iv) The requirement to provide parking spaces for the disabled does not apply to residential dwellings or factories and industrial activities with fewer than 10 employees. Where there are multiple tenants on a site, each tenant shall provide the number of mobility spaces required by their activities.

- (b) Location
 - (i) Accessible car parking spaces shall connect to an accessible route and be located as close as practical to the entrance to the building.

(c) Access

Accessible routes shall incorporate the following:

- (i) Maximum Transverse Grade 1:50
- (ii) Maximum Longitudinal Grade 1:33
- (iii) Minimum Clear Width 1.2m
- (iv) Kerb ramps* shall have no lip and a maximum grade of 1:8
- (v) Conflicts with manoeuvring vehicles shall be avoided

(d) Mobility Parking Space Design:

- (i) Minimum Dimensions:

Dimension	Length (m)
Width	3.5m
Length	5m
Height	2.5m

- (ii) Where a mobility parking space directly adjoins a footpath path on the same level as the parking space, the width of the common footpath may form part of the parking space.

(e) Surface

- (i) The accessible space shall provide a stable, firm, slip resistant, even surface with a slope not exceeding 1:50.

(f) Identification

- (i) Accessible parking spaces shall have clear ground marking in accordance with the international symbol of access. If the accessible parking space is not readily visible from the carpark entry directional signage is also to be provided.

(ii) Parking Provision Standards for the Inner Business Zone

- (a) Where a building is constructed, reconstructed, altered or added to, or any activity is established on a site or in a building or other structure adjacent to a Pedestrian Street and if parking is provided, it must not exceed a maximum of 1 space per 100m² of gross floor area.
- (b) Where a building or structure of up to 400m² of gross floor area is constructed and it is not adjacent to a Pedestrian Street and if parking is provided, it must not exceed 1 space per 100m² of gross floor area.
- (c) Where there are any external additions or alterations to existing buildings, structures and activities not adjacent to a Pedestrian Street and they do not exceed an additional 400m² of gross floor area and if parking is provided, it must not exceed 1 space per 100m² of gross floor area.

(c) Car Park Landscape Design

Any car parking area within all non-residential development and activity shall include the following landscape features:

- (i) Any part of a car parking area (excluding access points), fronting a road shall feature one specimen tree capable of growing to 5 m within 10 years along every 10 m of car parking frontage.
- (ii) Trees planted to meet the requirements of (a) above shall be so planted as to separate car parking area activities from pedestrian activities on the street.
- (iii) Any tree planted on a frontage shall be planted in an area with a minimum width of 2m and with a total area per tree of not less than 4m².
- (iv) An average of 1 specimen tree per 10 parks must be provided for internal car park areas. This ratio of trees to parks is as follows:

Number of Car Parks	Specimen Trees
0-9	0
10-19	2
20-29	3
30-39	4
40-49	5
Continued at the same	Continued at the same

- (v) Any trees located within a car park must have a protection area containing low planting with a minimum dimension or diameter of 1.5 metres. The specimen trees, on-going growing conditions and low planting must be maintained to a high standard at all times.

(d) Formation of Parking Spaces

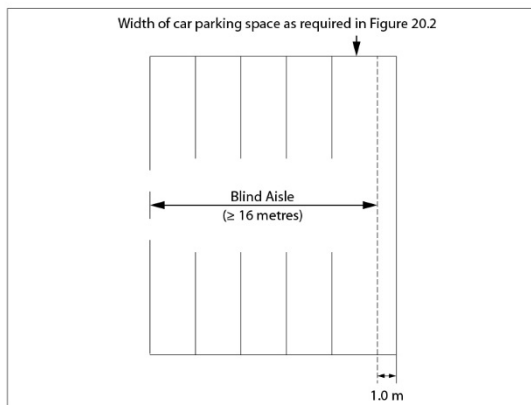
Any parking spaces required shall be formed to ensure their convenient, safe and efficient use and be designed in accordance with the following standards:

- (i) Where single space garages are provided, they shall have the following minimum dimensions:
 - (a) 5.4m clear length
 - (b) 3.0m clear width
 - (c) 2.4m garage door width
- (ii) Where double space garages are provided, they shall have the following minimum dimensions:
 - (a) 5.4m clear length
 - (b) 5.4m clear width
 - (c) 4.8m garage door width
- (iii) Vehicle circulation routes including ramps within a car parking area must have a width no less than 3.5m for one-way circulation routes and 5.5 m for two-way circulation routes and be able to accommodate the path of a 99 percentile car with a 6.3m turning radius.
- (iv) Queuing space in accordance with R20.4.2(a)(viii) shall be provided to permit a free flow of traffic from the road into the car parking area.
- (v) All car parking spaces shall comply with the dimensions and construction requirements detailed in Appendix 20C.
- (vi) All car parking areas are to be formed in a permanent, dust-free (not metal,

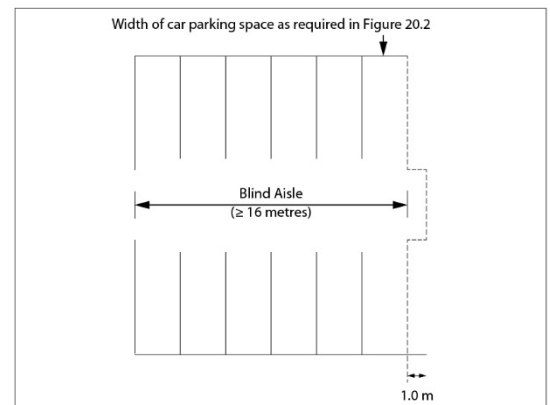
except for Permitted Activities in the Rural Zone) surface with kerbing, drainage and marking out of each parking space.

- (vii) An additional one metre clearance is to be added at the end of blind aisles which are 15 metres or more in length, to provide suitable manoeuvring to allow vehicles to exit the aisle without reversing. The additional one metre clearance can be added onto the end car park space and blind aisle (as shown in Figure A below), or alternatively, to the blind aisle only (as shown in Figure B below).

**FIGURE A
ONE METRE CLEARANCE TO CARPARK
SPACE AND BLIND AISLE**



**FIGURE B
ONE METRE CLEARANCE TO CARPARK
BLIND AISLE ONLY**



Any car parking space with a side directly next to a wall, support column or other obstacle which is 300mm high or more shall provide an additional 300mm width.

- (viii) The gradient of off-street parking surfaces for activities, with the exception of dwellings, shall be no more than:

Angle of slope measurement	Maximum slope of car park
Parallel to the angle of parking	1:20
In any other direction	1:16

- (ix) Any parking area designed to accommodate more than six spaces shall be designed so as to ensure that vehicles are not required to reverse either on or off a public road;
- (x) All manoeuvring of vehicles in a parking area must be contained on site;
- (xi) All required spaces shall be available for their intended use at all times and, with the exception of parking for individual residential dwellings, shall be available without needing to move another vehicle; and
- (xii) Any parking area providing more than 15 parking spaces between a public footpath and any building or recreational space shall provide a connecting footpath through the site to the primary building or activity entrance with a width of 1.5m clear of any overhanging parked vehicles. The connected footpath shall be clearly defined and able to accommodate users of all levels of mobility. Safe pedestrian access shall also be provided throughout the parking area.

(e) Loading Space Provision

- (i) Every owner or occupier who constructs, substantially reconstructs or changes the use of a property, shall make adequate provision (both in terms of the type and numbers of vehicles) on the site for the loading of or unloading from vehicles of all goods and materials associated with the activity, except there is no loading requirement for:
 - (a) sites have sole frontage onto a Pedestrian Street; or
 - (b) sites in the Local Business Zone, where the construction, alteration of, or addition to a building is no more than 50m² or 20% of the existing gross floor area, whichever is the lesser; or
 - (c) sites in the Local Business Zone where the activity is 300m² or less; or
 - (d) residential developments with fewer than 20 dwellings where the parking space requirements in performance standard (b) are fully met.
- (ii) All loading and unloading shall occur within the site in a manner that does not:
 - (a) impede access to parking spaces or areas needed for vehicle manoeuvring and circulation within the site; or
 - (b) adversely affect traffic flow along the street frontage for pedestrians, cyclists and vehicles or parking availability in the road reserve.
- (iii) Loading spaces which are accessed from Major or Minor Arterials or Collector Roads shall be designed so that it is not necessary to reverse vehicles either on to or off the street.

(f) Loading Space Design

- (i) Any loading spaces provided must meet the following minimum dimension requirements:

Vehicle Type	Minimum Space Width (m)	Minimum Space Length (m)	Minimum Vertical Clearance (m)
<i>Small Rigid Truck(6m)</i>	3.5	6	3.5
<i>Medium Rigid Truck(8m)</i>	3.5	8	4.5
<i>Large Rigid Truck(11m)</i>	3.5	11.5	4.5
<i>Articulated Truck (17-20m)</i>	3.5	20	4.5
<i>Courier Van</i>	3.0	6	3.2

- (ii) Where the service vehicle is loaded or unloaded from the ground rather than an adjacent platform, additional width sufficient to meet the anticipated loading and unloading requirements of the activity, including by forklift, shall be provided.
- (iii) Within the area of any loading space there shall be a maximum gradient of 1:25 (4%).
- (iv) In cases where the loading area is gated, sufficient space shall be provided within the site and queuing space between the access crossing to the site and the gate to accommodate the largest truck visiting the site.
- (v) Where there are more multiple tenants on a site each tenant shall provide the number of loading spaces required by their activities, provided that where the site is under single ownership or management shared facilities or equivalent capacity may be provided instead.

Note to Plan Users

The design of all loading facilities, including access, manoeuvring and circulation space, shall take into account the provisions of AS.2890.2 2002 Parking Facilities Part 2: Off-street Commercial Vehicle Facilities and RTS 18 New Zealand on-Road Tracking Curves for Heavy Motor Vehicles.

(g) Cycle Parking – Provision and Design

Where there is an increase to the existing gfa, or a new activity is established on a site or in a building or other structure, cycle parking provision must be made on-site in accordance with the following provisions:

- (i) Cycle parking spaces shall be provided on-site as follows:

Activity	Threshold	Requirement
All employment	More than 10 employees per tenancy.	1 space per 10 employees.
Sports Venues (indoor & outdoor) Entertainment Facilities (cinemas, theatres) Libraries Museums Places of Worship Conference/ Convention Centres	Capacity for up to 100 visitors/attendees. Capacity for more than 100 visitors/attendees.	1 space per 20 people that can be accommodated. 5 spaces plus 1 space per 40 people that can be accommodated beyond first 100 people.
Retails Activities	Up to 500m ² GFA Over 500m ²	No customer cycle requirement 1 customer cycle space for retail activities with a GFA between 500m ² and 1,000m ² plus 1 customer cycle space per 1,000m ² GFA for additional areas over 1,000m ²

- (ii) Cycle parking facilities shall meet the minimum cycle parking dimensions in Appendix 20D and be securely anchored, support the bicycle frame and front wheel and allow for the bicycle frame to be secured.
- (iii) Cycle parking facilities shall be located so as not to impede pedestrian thoroughfares, accessible routes, vehicle circulation or manoeuvring areas.
- (iv) Cycle parking facilities intended for short-stay use, such as for visitors or customers, shall be located as close as possible to and no more than 50m from at least one main pedestrian entrance to the building or activity.
- (v) Where cycle parking is intended for long-stay use, such as for staff, then the cycle parking facilities shall be located in a covered and secure area, unless they are located in an area where access by the general public is generally excluded.
- (vi) Cycle parking facilities shall be maintained and not be obstructed by the subsequent erection of any structure or the storage of goods or be used for any other than cycle parking.
- (vii) Where an assessment of the required cycle parking facilities is to provide for employees, then employees shall be calculated on the basis of the maximum number of employees on-site at any one time on a day-to-day basis. It shall not be based on or include employee numbers required to meet seasonal retail peaks.

(h) Cycle Parking – End-of-Trip Facilities

Where there is an increase to the existing gfa, or a new activity is established on a site or in a building or other structure, cycle parking provision must be made on-site in accordance with the following provisions:

- i Where staff cycle parking spaces are required, end-of-trip facilities shall be provided on-site as follows:

Number of staff cycle parks required	Number of end of trip facilities required
1-10	None
11-100	1 shower per every 10 staff cycle parks required 1 locker per every staff cycle park provided
>100	10 showers for the first 100 staff cycle parks required + 2 showers for each additional 50 staff cycle parks required 1 locker per every staff cycle park provided

20.5 Rules Restricted Discretionary Activities

R20.5.1 RESTRICTED DISCRETIONARY ACTIVITIES

Any permitted activity which does not comply with one or more of the performance standards in R20.4.2 is a Restricted Discretionary Activity. Council restricts its discretion to the following matters:

- a) Avoiding, remedying or mitigating adverse effects on the safety and efficiency of the land transport network;
- b) Avoiding, remedying or mitigating any other effects deriving from non-compliance with the particular standard(s) that is not met;
- c) Whether the approval of the Road Controlling Authority, NZTA, or Kiwi Rail has been obtained

Non-notification

No such applications (R20.5.1) are required to be publicly notified.

R20.5.2 RESTRICTED DISCRETIONARY ACTIVITIES – DRIVE THROUGH FACILITIES

Any activities which include a Drive Through Facility are a Restricted Discretionary Activity with regard to:

- The safe and efficient operation of the roading network
- That access points provide for the safe and efficient control of traffic to and from the site.

Note to Plan Users

Refer to Section 5.4(k) – Special Requirements Relating to drive through facilities, for additional information to be provided when lodging an application for a resource consent for a drive through facility.

Non-notification

No such application (R20.5.2) is required to be publicly notified.

20.6 Rooding Hierarchy

The rooding hierarchy-differentiates between roads by function. Roads at the top of the hierarchy are generally arterial routes that cater for through traffic and often have high traffic volumes. The City's rooding hierarchy includes:

Primary roads:

- Major arterial roads
- Minor arterial roads
- Collector roads

Secondary roads:

- Local roads

Other roads:

- Pedestrian streets

These are described in more detail below and in the tables and figures below.

Primary Roads

i Major Arterial Roads

Major Arterial Roads are of strategic importance to the Region. They provide interconnections between areas within the City and distribute traffic from major intercity links. Access is generally at grade but may be limited. Urban traffic volumes are typically greater than 20,000 vehicles per day and rural 5,000 vehicles per day with a significant number of heavy vehicles. Typical urban operating speeds are 50 to 70 km/h and rural 80 to 100 km/h. Major Arterial Roads include State Highways 3, 54, 56 and 57 and Railway Road and Tremaine Avenue.

ii Minor Arterial Roads

Minor Arterial Roads provide access between Collector and Major Arterial Roads. These roads have a dominant through vehicular movement and carry the major public transport routes. Access to property may be restricted and rear servicing facilities may be required. Urban traffic volumes are typically 8,000 vehicles per day to 20,000 vehicles per day and rural from 1,000 to 5,000 vehicles per day with a higher proportion of heavy vehicles. Typical urban operating speeds are 40 to 60 km/h and rural 80 to 100 km/h. Botanical Road and Te Awe Awe Street are examples of Minor Arterial Roads.

iii Collector Roads

Collector Roads provide circulation in local areas and links to arterial roads, while balancing these needs with pedestrian and local amenity values. These roads provide access for all modes of transport including public transport. Typical traffic flows are between 3,000 and 10,000 vehicles per day. Examples of Collector Roads are Highbury Avenue and Brooklyn Heights Drive.

Secondary Roads

iv Local Roads

Local Roads provide access and connectivity within a local area. Low vehicle speeds, pedestrian and local amenity values predominate. Such roads typically carry up to 3,000 vehicles per day and their two lanes provide

for on-street parking, property access and pedestrian needs. Buick Crescent and Milverton Avenue are examples of Local Roads.

Other Roads

v **Pedestrian Streets**

Pedestrian Streets are located in the centre of the City. They provide a safe and convenient network of links to carry pedestrians into the activities offered in the Central Area.

- vi The Square, Broadway Avenue, Main Street, Coleman Place, Cuba Street, King Street, Fitzherbert Avenue, Church Street, Ashley Street and George Street are all Pedestrian Streets. Figure 20A.4 shows all Pedestrian Streets in Palmerston North.

20.6.1 PRIMARY ROADS

20.6.1.1 Major Arterial Roads (refer to the figures attached)

Road	Range
State Highway 3	
Rangitikei Street	from the City Boundary to the intersection with Grey Street and Walding Street
Grey Street	from the intersection with Rangitikei Street and Walding Street to the intersection with Princess Street
Princess Street	from the intersection with Grey Street to the intersection with Main Street
Main Street	from the intersection with Princess Street to the intersection with Napier Road and Upper Main Street
Napier Road	from the intersection with Main Street and Upper Main Street to the City Boundary
State Highway 56	
Pioneer Highway	from the Longburn Rail Overbridge to the intersection with Maxwells Line
State Highway 57	
Fitzherbert East Road	from the intersection with State Highway 3 to the Pahiatua Aokautere Road and Aokautere Drive intersection
Aokautere Drive	from the intersection with Pahiatua Aokautere Road and Fitzherbert East Road to the intersection with Summerhill Drive and Turitea Road
Turitea Road	from the intersection with Summerhill Drive and Aokautere Drive to the intersection with Old West Road
Old West Road	from the intersection with Turitea Road to the intersection with Tennent Drive
Tennent Drive	from the intersection with Old West Road to the City Boundary
The Ring Road	
Pitt Street	from the intersection with Ferguson Street to the intersection with Cuba Street and Bourke Street
Bourke Street	from the intersection with Cuba Street and Pitt Street to the intersection with Walding Street
Walding Street	from the intersection with Bourke Street to the intersection with Rangitikei Street and Grey Street
Pioneer Highway	from the joining location with Main Street to the intersection with Maxwells Line

Main Street	from the joining location with Pioneer Highway to the intersection with Pitt Street
Ferguson Street	from the intersection with Pitt Street to the intersection with Princess Street
Princess Street	from the intersection with Ferguson Street to the intersection with Main Street.
Other Major Arterial Roads	
State Highway 54 Kairanga Bunnythorpe Road	between the intersection with Milson Line and the intersection with Rangitikei Line
Fitzherbert Avenue	from the intersection with Ferguson Street to the joining location with Tennent Drive
Kelvin Grove Road	from the joining location with McLeavey Drive to the joining location with Tremaine Avenue
No. 1 Line	from the joining location with Tremaine Avenue to the intersection with Reserve Road
Main Street	from the joining location with Pioneer Highway to the intersection with Pitt Street
McLeavey Drive	in its entirety
Pahiatua Aokautere Road (Pahiatua Track)	from the intersection with Aokautere Drive and Fitzherbert East Road to the City Boundary
Pioneer Highway	from the joining location with Main Street to the intersection with Maxwells Line
Railway Road	from the intersection with Tremaine Avenue and Vogge Street to the City Boundary
Roberts Line	from the intersection with Napier Road to the joining location with McLeavey Drive
Summerhill Drive	in its entirety
Tennent Drive	from the joining location with Fitzherbert Avenue to the intersection with Old West Road
Tremaine Avenue	in its entirety
Ashhurst Bunnythorpe Road	from the intersection with Mulgrave Street to Stoney Creek Road
Kairanga Bunnythorpe Road	from Longburn Rongotea Road to Campbell Road
Longburn Rongotea Road	from the intersection with State Highway 56 to Kairanga Bunnythorpe Road

20.6.1.2 Minor Arterial (refer to the figures attached)

Road	Range
Airport Drive	in its entirety
Albert Street	from the intersection with Main Street to the intersection with Te Awe Awe Street and Pahiatua Street
Amberley Avenue	in its entirety
Botanical Road	in its entirety
Cambridge Avenue	in its entirety
College Street	from the intersection with Maxwells Line to the intersection with Botanical Road
Featherston Street	in its entirety
Hillary Crescent	in its entirety
John F Kennedy Drive	in its entirety
Keith Street	from the intersection with Napier Road to the intersection with Mihaere Drive
Kelvin Grove Road	from the intersection with McLeavey Drive to the intersection with Stoney Creek Road
Maxwells Line	from the intersection with Pioneer Highway to the intersection with College Street
Mihaere Drive	in its entirety
Milson Line *	from the intersection with Tremaine Avenue
Mulgrave Street (Ashhurst)	from the intersection with Salisbury Street to the intersection with Ashhurst Bunnythorpe Road
Pacific Drive	in its entirety
Park Road	from the joining location with Botanical Road to the intersection with Fitzherbert Avenue
Ruahine Street	from the intersection with Tremaine Avenue to the intersection with Main Street (State
Salisbury Street (Ashhurst)	in its entirety
Saddle Road (Ashhurst)	from the joining location with Salisbury Street to the City Boundary
Stoney Creek Road	from the intersection with Napier Road (SH3) to the City
Te Awe Awe Street	in its entirety
Upper Main Street	in its entirety
Vogel Street	in its entirety
Campbell Road	from the intersection with Stoney Creek Road to the City Boundary

20.6.1.3**Collector Roads (refer to the figures attached)**

Road	Range
Albert Street	from the intersection with Te Awe Awe Street and Pahiatua Street to the intersection with Manawatu Street and from the intersection with Main Street to the intersection with
Benmore Avenue	in its entirety
Bennett Street	from the intersection with Rangitikei Line (State Highway 3) to the intersection with Benmore Avenue
Bourke Street	from the intersection with Featherston Street to the intersection with Walding Street
Brentwood Avenue	in its entirety
Brooklyn Heights Drive	in its entirety
Camp Road	in its entirety
Cashmere Drive	in its entirety – for the purposes of any site which was vacant at 1 July 2012 Cashmere Drive is to be regarded as a local road under
Clarke Avenue	in its entirety
College Street	from the intersection with Botanical Road to the intersection with Albert Street
Cook Street	in its entirety
Cuba Street	from the intersection with Pascal Street to the intersection with Pitt Street and Bourke Street
Fairs Road	in its entirety
Ferguson Street	from the joining location with Rugby Street to the intersection with Pitt Street, and from the intersection with Princess Street to the intersection with Ruahine Street.
Fernlea Avenue	in its entirety
Gillespies Line	from the intersection with Tremaine Avenue, Botanical Road and Admiral Place to the intersection with Benmore Avenue
Grey Street	from the intersection with Princess Street to the intersection with Ruahine Street
Haydon Street	in its entirety
Highbury Avenue	in its entirety
James Line	in its entirety
Johnstone Drive	in its entirety
Kaimanawa Street	in its entirety
Keith Street	from the intersection with Mihaere Drive to the joining location with Rata Street

Road	Range
Kelvin Grove Road	from the intersection with Stoney Creek Road to the intersection with Ashhurst Bunnythorpe
Koromiko Avenue	in its entirety
McGregor Street	in its entirety
Manawatu Street	in its entirety
Maxwells Line	from the intersection with College Street to the eastern end
Monrad Street	in its entirety
Oxford Street (Ashhurst)	in its entirety
Pahiatua Street	in its entirety
Park Road	from the intersection with Fitzherbert Avenue to the intersection with Victoria Avenue
Parnell Heights Drive	in its entirety
Pascal Street	in its entirety
Pembroke Street	in its entirety
Pitama Road	in its entirety
Rangiora Avenue	from the intersection with Koromiko Avenue to the intersection with Vogel Street
Rata Street	from the joining location with Keith Street to the intersection with Shelley Street
Roberts Line	from the intersection with Kelvin Grove Road to Kairanga Bunnythorpe Road
Rosalie Terrace	In its entirety
Roy Street	in its entirety
Ruahine Street	from the intersection with Main Street to the intersection with Pahiatua Street
Ruapehu Drive	in its entirety
Rugby Street	from the intersection with Maxwells Line to the joining location with Ferguson Street
Schnell Drive *	from the joining location with Brooklyn Heights Drive to the intersection with Fernlea Avenue
Shelley Street	in its entirety
Slacks Road	in its entirety
Victoria Avenue	in its entirety
Ward Street	in its entirety
Wood Street	in its entirety
York Street (Ashhurst)	in its entirety

20.6.1.4 Local Roads (refer to the figures attached)

All other roads not identified as Major Arterial Roads, Minor Arterial Roads, Collector Roads or Pedestrian Streets.

20.6.1.5 Pedestrian Streets (refer to figure 20A.4)

Road	Range
Ashley Street	from the corner with Church Street to the rear boundary of 12-16 Ashley Street, being Lot 2 DP89317
Broadway Avenue	from the intersection with The Square to the intersection with Princess Street
Church Street	from the intersection with Princess Street to the intersection with Linton Street (south side) and Pitt Street (north side)
Coleman Place	in its entirety
Cuba Street	from the intersection with Rangitikei Street to the intersection with Andrew Young Street (south side) and Campbell Street (north side)
Fitzherbert Avenue	from the intersection with The Square to the intersection with Ferguson Street
George Street	in its entirety
King Street	in its entirety
Main Street	from the intersection with Princess Street to the intersection with Andrew Young Street (north side) and Pitt Street (south side)
Rangitikei Street	from the intersection with The Square to the intersection with Queen Street (eastern side) and 57 Rangitikei Street (western side)
The Square	in its entirety

20.6.1.6 Restricted Access Roads (refer to figure 20A.5)

Road	Range
Camp Road	in its entirety
Forest Hill Road	from the boundary of Lot 1 DP 85551 to its eastern end
Greens Road	in its entirety
Kahuterawa Road	from the boundary of Pt Sec 281A Town of Fitzherbert to its eastern end
North Range Road	in its entirety
Pahiatua Aokautere Road (Pahiatua Track)	from Harrison Hill Road intersection to the City Boundary
Riverside Drive	in its entirety

Road	Range
Scotts Road	from the boundary of Lot 4 DP 31668 to its eastern end
Setters Line (South)	from the intersection with Railway Road to its boundary with the Airport Zone
Shirriifs Road	in its entirety – Shirriifs Road will cease to be a restricted access road on 1 July 2016 unless, before then, the Council has notified a further plan change to maintain this
South Range Road	in its entirety
Staces Road	in its entirety – Staces Road will cease to be a restricted access road on 1 July 2016 unless, before then, the Council has notified a further plan change to maintain this
Te Matai Road	from the intersection with Napier Road to the intersection with Riverside Drive
Turitea Road	from Ngahere Park Road intersection to its eastern end

NOTES TO PLAN USERS

- The figures which follow on the next few pages highlight those areas where the different roading hierarchies apply.
- Where a property is on a corner site that has two different classifications, each classification shall only apply to that particular frontage only.
- Roads with an * in 20.6.1.2, or 20.6.1.3 above indicate those roads that may be reclassified in the future following strategic land transport improvements (refer to the following table in Section 20.6.1.7).
- Roads which have been formally declared as Limited Access Roads by the New Zealand Transport Agency and the Palmerston North City Council, as at 13 May 2019 are listed in Appendix 20.7.
- The Palmerston North Roding Hierarchy identified in Figure 20A.1, can be defined, using the One Network Road Classification, as follows:

Current Roding Hierarchy

1. Primary Roads

State Highway 57:

State Highway 3:

State Highway 56:

State Highway 54:

20.6.1.1 Major Arterial Roads

20.6.1.2 Minor Arterial Roads:

20.6.1.3 Collector Roads:

20.6.1.4 Local Roads:

Should the Council seek to amend the Roding Hierarchy in the future to align it to the New Zealand Transport Agency's One Network Road Classifications, a plan change to the District Plan is required.

One Network Classification

equivalent to National Road

equivalent to Regional Road

equivalent to Regional Road

equivalent to Arterial Road

equivalent to Arterial Road

equivalent to Arterial Road

equivalent to Primary Collector

equivalent to Access Road

20.6.1.7 Future Reclassification Roads

There are a number of roads within the Palmerston North City that are likely to be reclassified in the future following strategic land transport improvements as identified in the Regional Land Transport Strategy and local strategic plans. Should Council seek to amend the Rooding Hierarchy to reflect these changes, a plan change to the District Plan is required.

Roads for future reclassification following Strategic Land Transport Improvements		
Road	Extent	Future change anticipated
Te Matai Road	from the southern intersection with Napier Road to the intersection with Riverside Drive	Raise to Major Arterial
Riverside Drive	in its entirety	Raise to Major Arterial
Staces Road	in its entirety	Raise to Major Arterial
Milson Line	from the intersection with John F Kennedy Drive to the intersection with Flyers Line	Lower to Collector
Schnell Drive+	in its entirety	Raise to Collector

+ Part of Schnell Drive is currently a private road and this section of it would have to be made public road under the relevant statutory procedure before this classification could be proposed.

The Regional Land Transport Strategy also includes a future link via a new bridge between Pioneer Highway and State Highway 57 as a future Major Arterial Route. The location of this future route is not yet determined. As such, there are no specific roads that can be identified at this stage.

Figure 20A.1 Roding Hierarchy – Palmerston North (Rural)

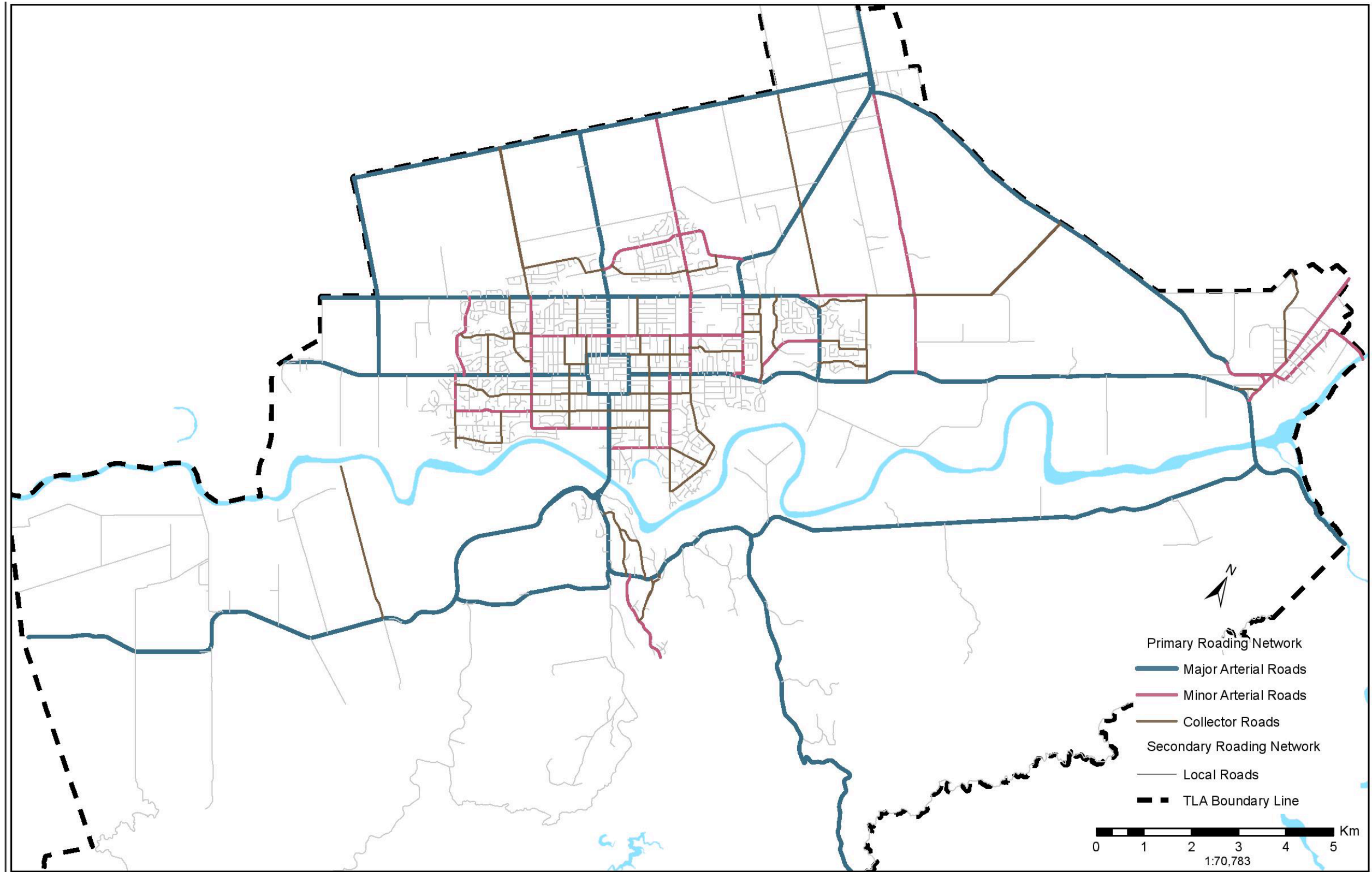


Figure 20A.2 Rooding Hierarchy – Palmerston North (Urban)

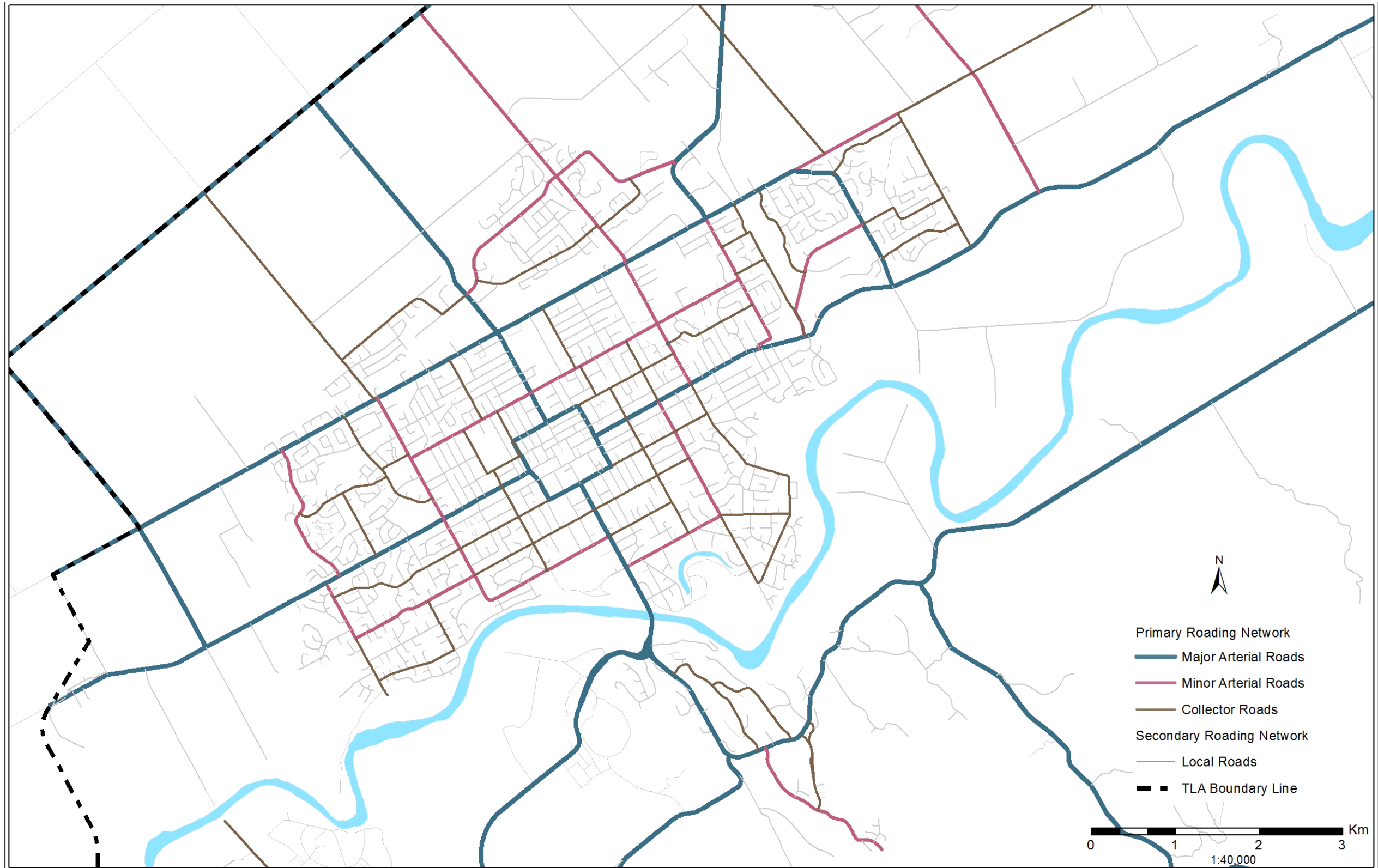


Figure 20A.3 Rooding Hierarchy - Ashhurst

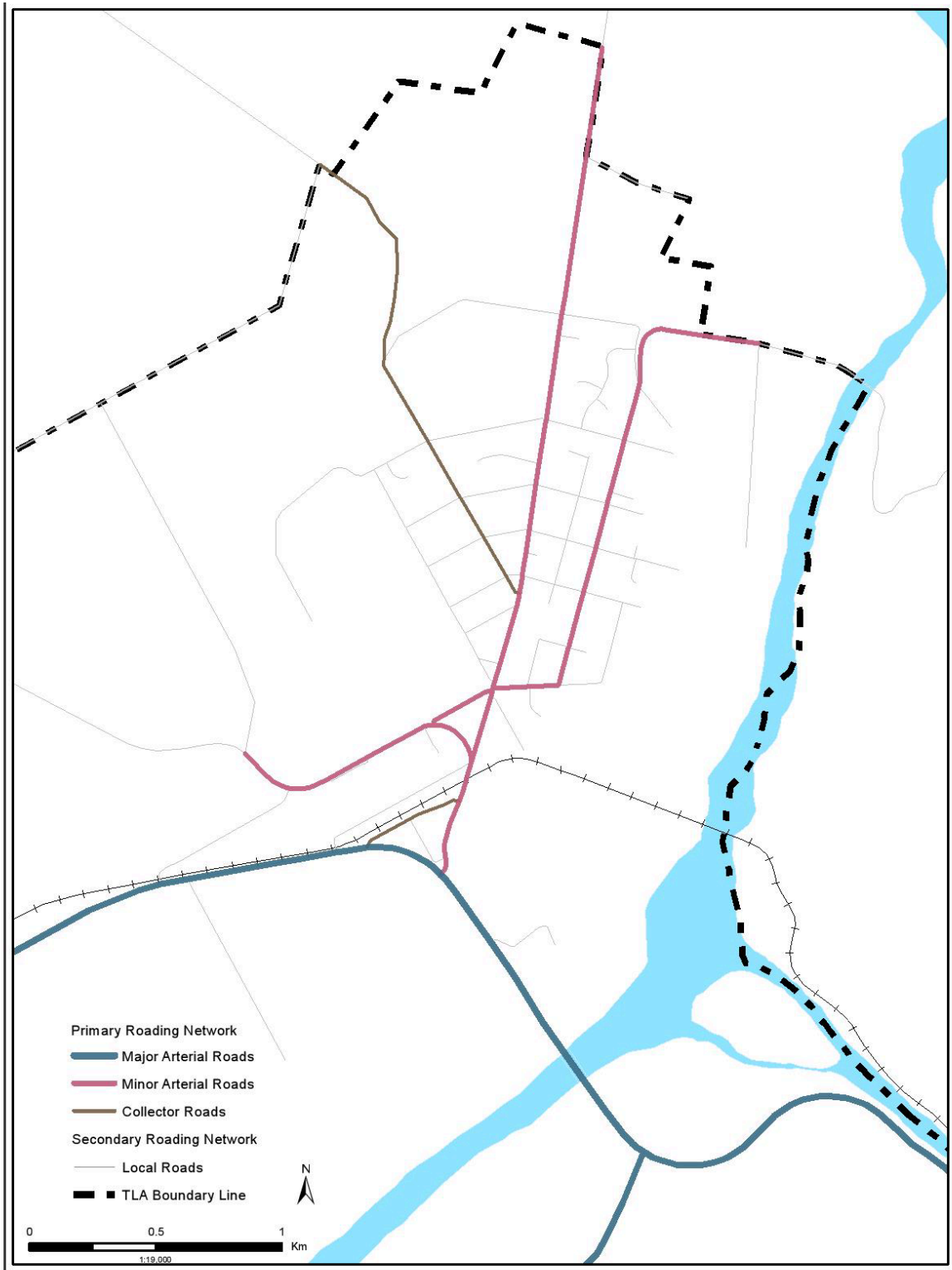


Figure 20A.4 Roding Hierarchy – Palmerston North Central Area

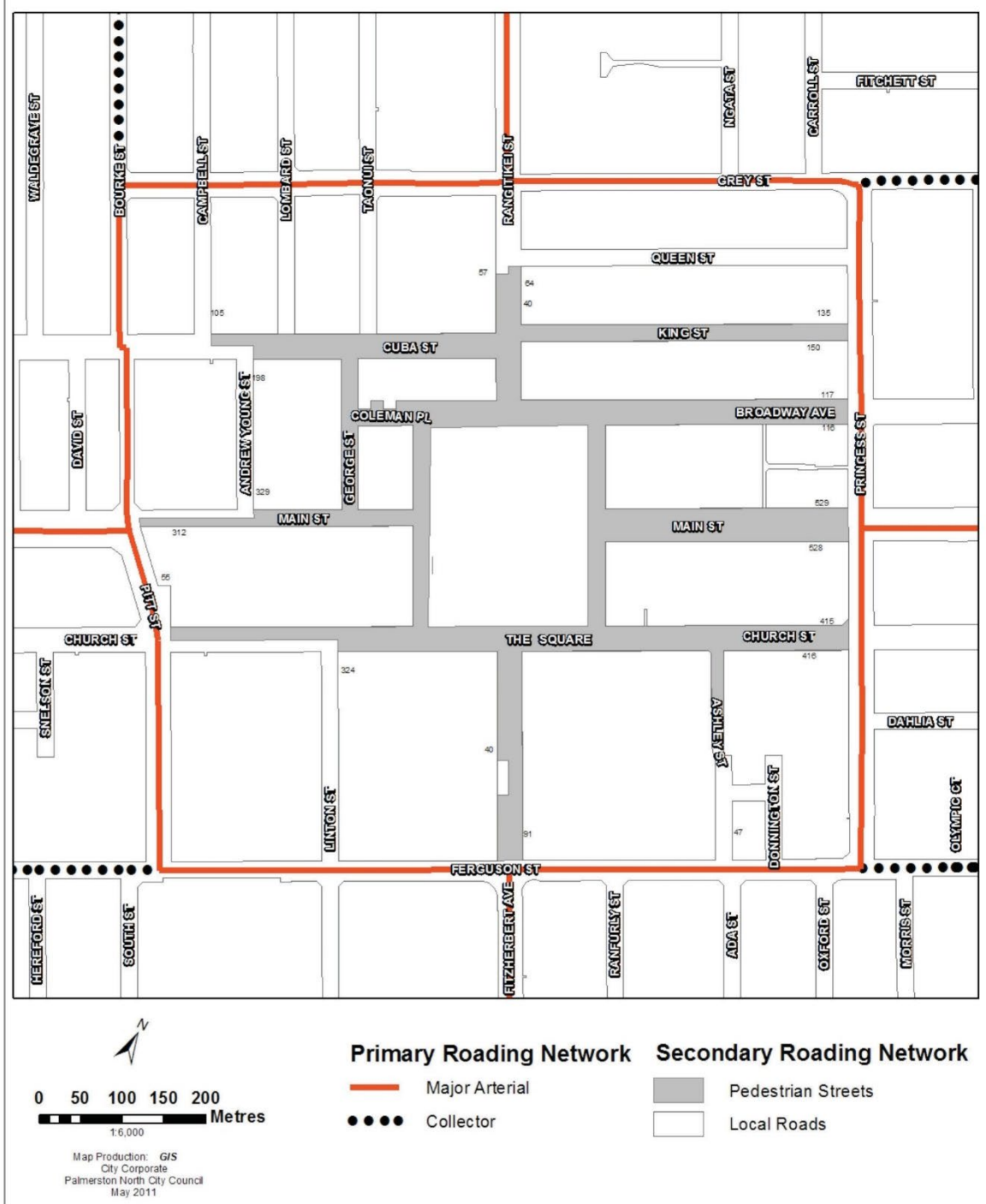


Figure 20A.5 Restricted Access Roads

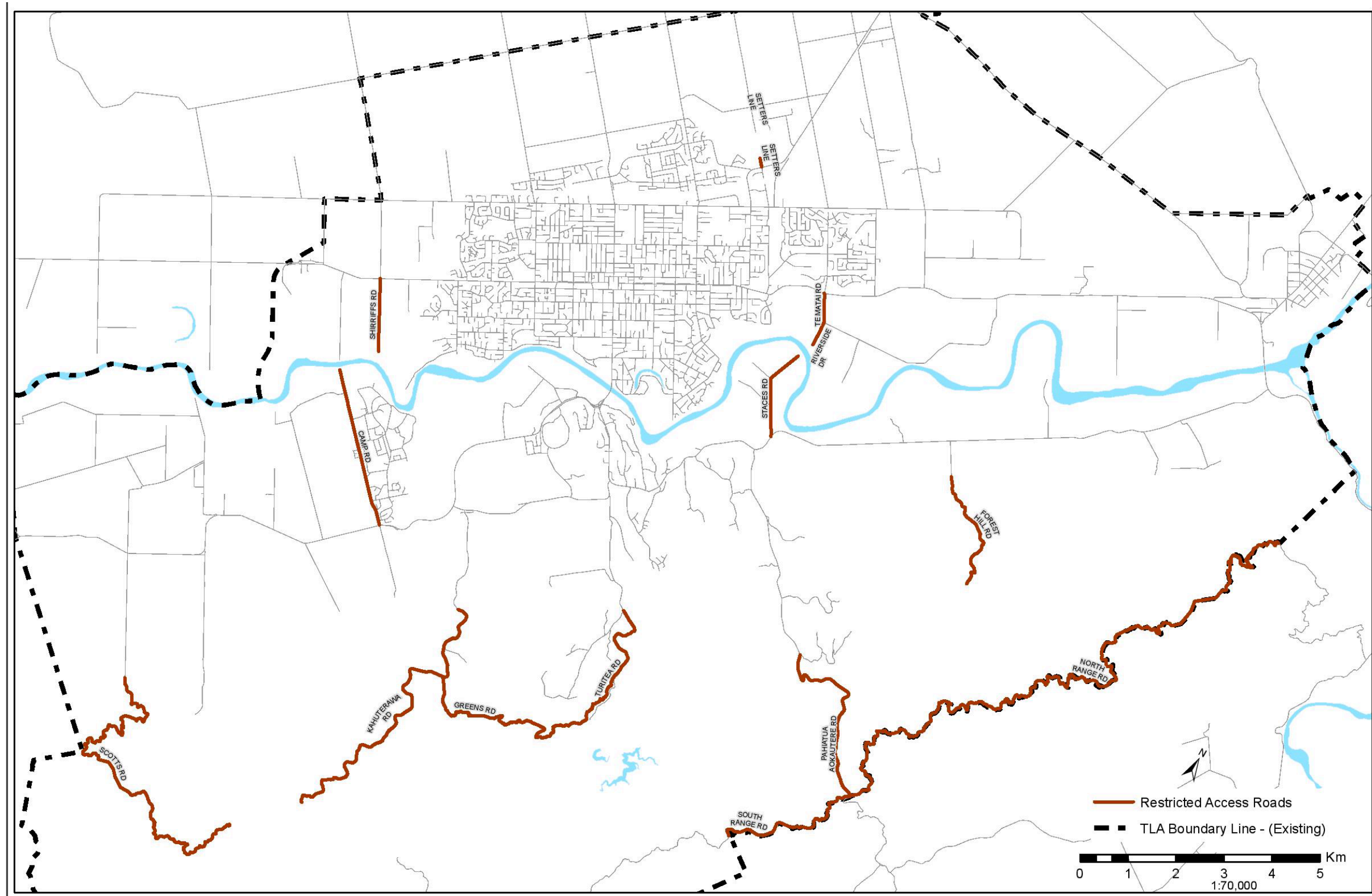
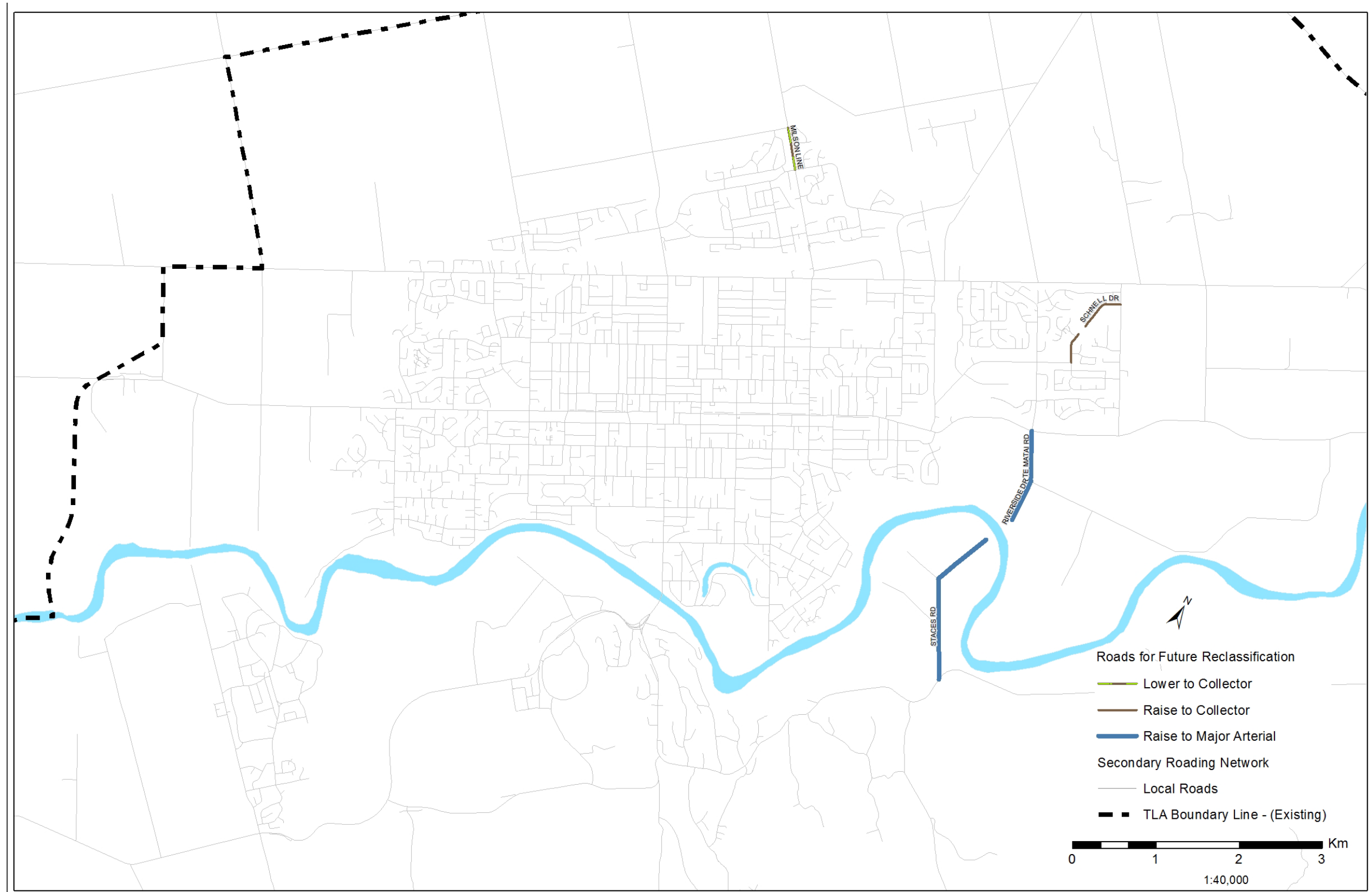


Figure 20A.6 Roads for Future Reclassification



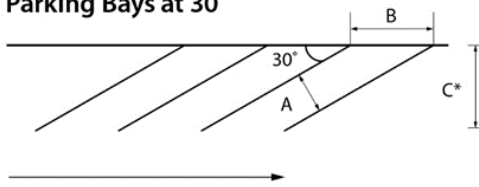
20.7 Limited Access Roads within Palmerston North

NEW ZEALAND TRANSPORT AGENCY	
Road	Range
State Highway 3 (Napier Road)	Sutton Place - Manawatu Gorge
State Highway 54 (Kairanga Bunnythorpe Road)	between Rangitikei Line (SH3) - Milson Line
State Highway 56	Mangaone Stream - Longburn Rail Overbridge
State Highway 57: (Fitzherbert East Road)	Pahiatua Aokautere Road – Napier Road (SH 3)
Aokautere Drive	Pahiatua Aokautere Road – Summerhill Drive
Old West Road	Summerhill Drive to Kahuterawa Road
Tennent Drive	Kahuterawa Road - Tane Road
PALMERSTON NORTH CITY COUNCIL	
Road	Range
State Highway 57 (Tennent Drive)	Mogine Road - Old West Road

APPENDIX 20C

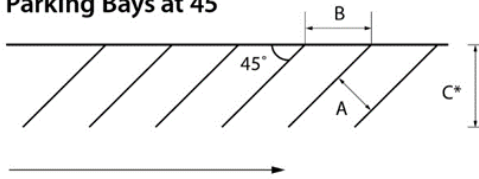
CAR PARK SPACE DIMENSIONS

Parking Bays at 30°



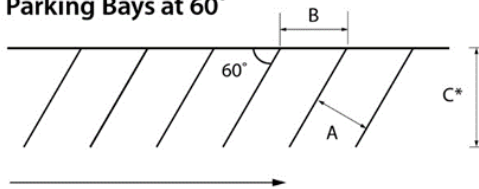
User Class	A	B	C ₁	C ₂	C ₃	Aisle Width
1	2.1	4.2	4.4	4.1	4.5	3.1
2	2.3	4.6	4.4	4.1	4.7	3.0
3	2.5	5.0	4.4	4.1	4.9	2.9
4	3.6	6.4	4.4	4.1	5.5	2.9

Parking Bays at 45°



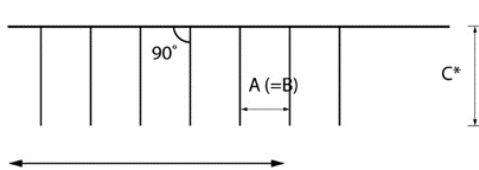
User Class	A	B	C ₁	C ₂	C ₃	Aisle Width
1	2.4	3.4	5.2	4.8	5.5	3.9
2	2.5	3.5	5.2	4.8	5.6	3.7
3	2.6	3.7	5.2	4.8	5.7	3.5
4	3.6	5.1	5.2	4.8	6.1	3.3

Parking Bays at 60°



User Class	A	B	C ₁	C ₂	C ₃	Aisle Width
1	2.4	2.8	5.7	5.1	5.9	4.9
2	2.5	2.9	5.7	5.1	6.0	4.6
3	2.6	3.0	5.7	5.1	6.0	4.3
4	3.6	4.2	5.7	5.1	6.3	4.0

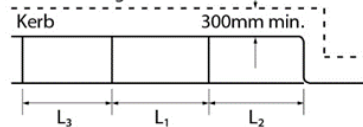
Parking Bays at 90°



User Class	A	B	C ₁	C ₂	C ₃	Aisle Width
1	2.4	2.4	5.4	4.8	5.4	6.2
2	2.5	2.5	5.4	4.8	5.4	5.8
3	2.6	2.6	5.4	4.8	5.4	5.4
4	3.6	3.6	5.4	4.8	5.4	5.0

Parallel Parking Bays

wall, parapet, etc.
> 150 mm high



RHS kerb of one-way road or
centre line of two-way road

User Class	A	B	L ₁	L ₂	L ₃	Aisle Width
1, 2, 3	2.1	2.1				
4	3.6	3.6				
All			6.3	6.6	5.4	3.0
All			6.1	6.4	5.4	3.3
All			5.9	6.2	5.4	3.6

- With the exception of 90° car parks, aisle width dimensions are for manoeuvring into and out of car parks with one-way aisles.
- For parking bays at 90° with two-way aisles, the aisle width should be the greater of 5.5 metres for circulation or the manoeuvring aisle widths stated in the above table.
- For parallel parking bays with two-way aisles, aisle widths should be at least 3 metres wider than for one-way aisles.

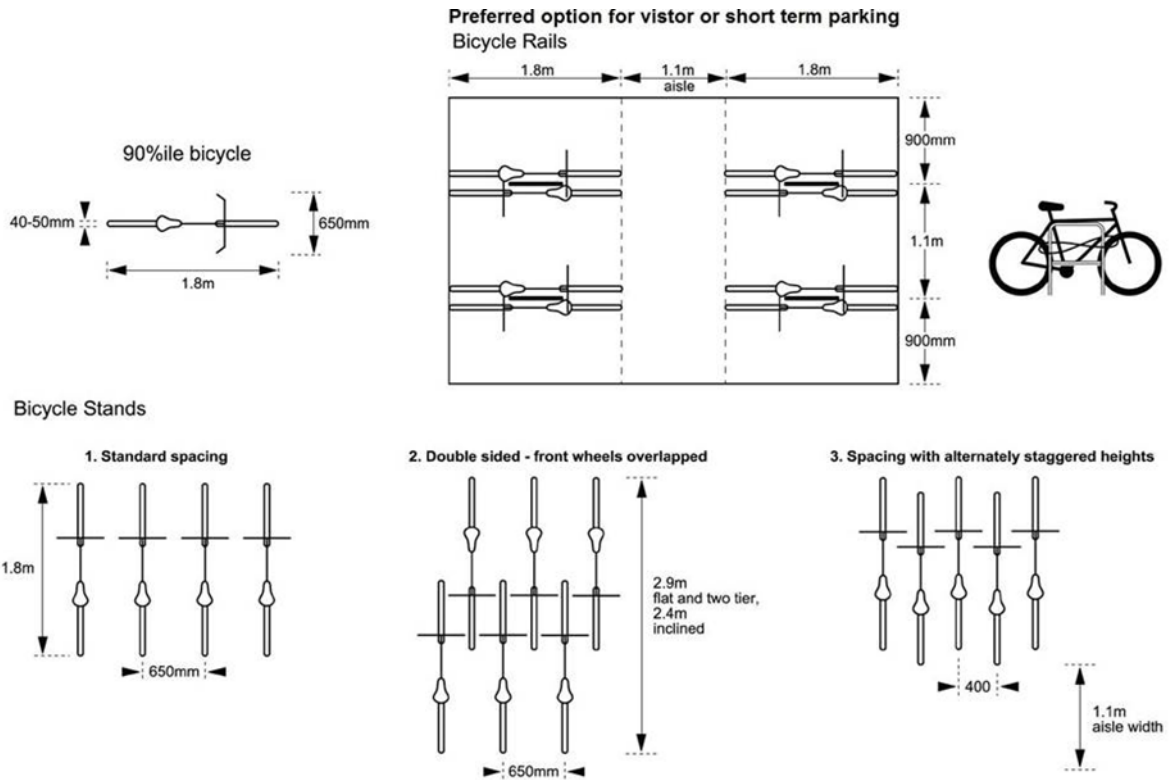
NOTE TO PLAN USERS

- User Class is defined as:
 1. for all day parking, such as tenant, employee and commuter parking;
 2. for medium-term parking, such as long-term town centre parking, motels, airport visitors, sports and entertainment centres;
 3. for short-term and goods or children loading parking, such as short-term town centre parking, shopping parking, hospitals and medical centres.
 4. Accessible parking for people with disabilities.
- Dimension C is selected as follows:
 - 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;
 - 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;
- Dimension L is selected as follows:
 - L1 - space length for consecutive parallel parking spaces;
 - L2 - space length for obstructed end spaces;
 - L3 - space length for unobstructed end spaces;
- Aisle width dimensions are for one-way aisles.

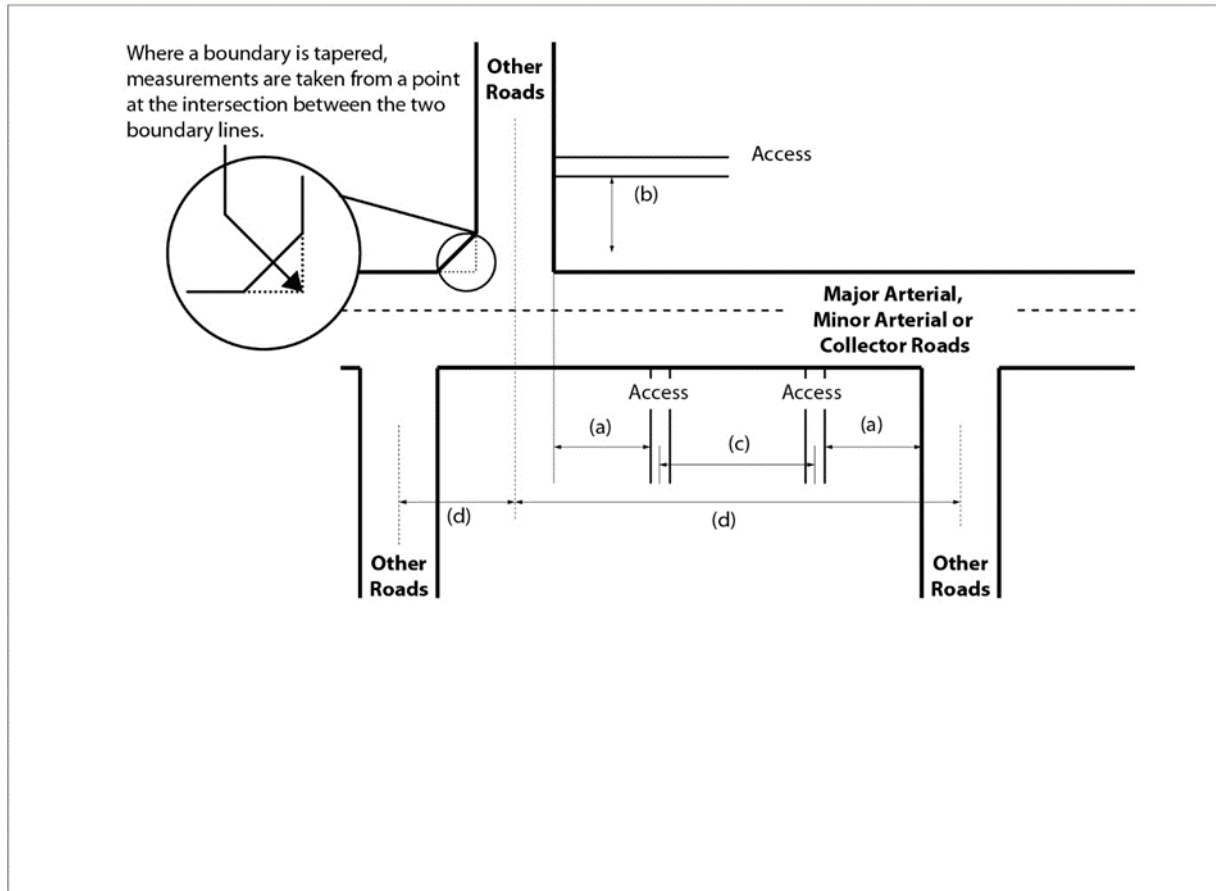
For parking bays at 90° with two-way aisles, aisle width should not be less than 5.5 metres.

For parallel parking bays with two-way aisles, aisle widths should be at least 3 metres wider than for one-way aisles.
- These standards are adapted from AS 2890.1 - 1993 with a more appropriate width for accessible car parks for people with disabilities. They have been established to be consistent with requirements for car parks within buildings.

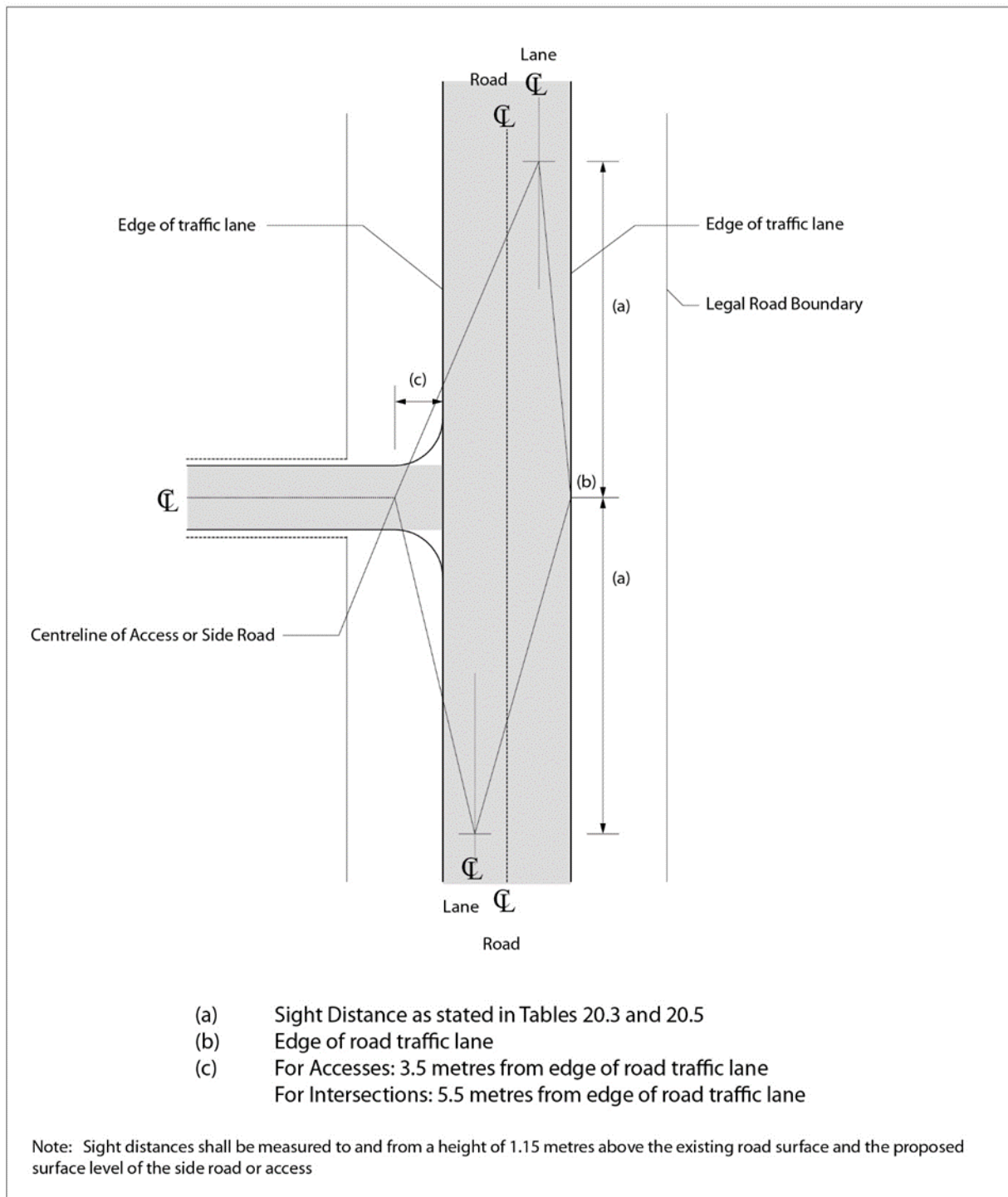
APPENDIX 20D CYCLE PARK SPACE DIMENSIONS



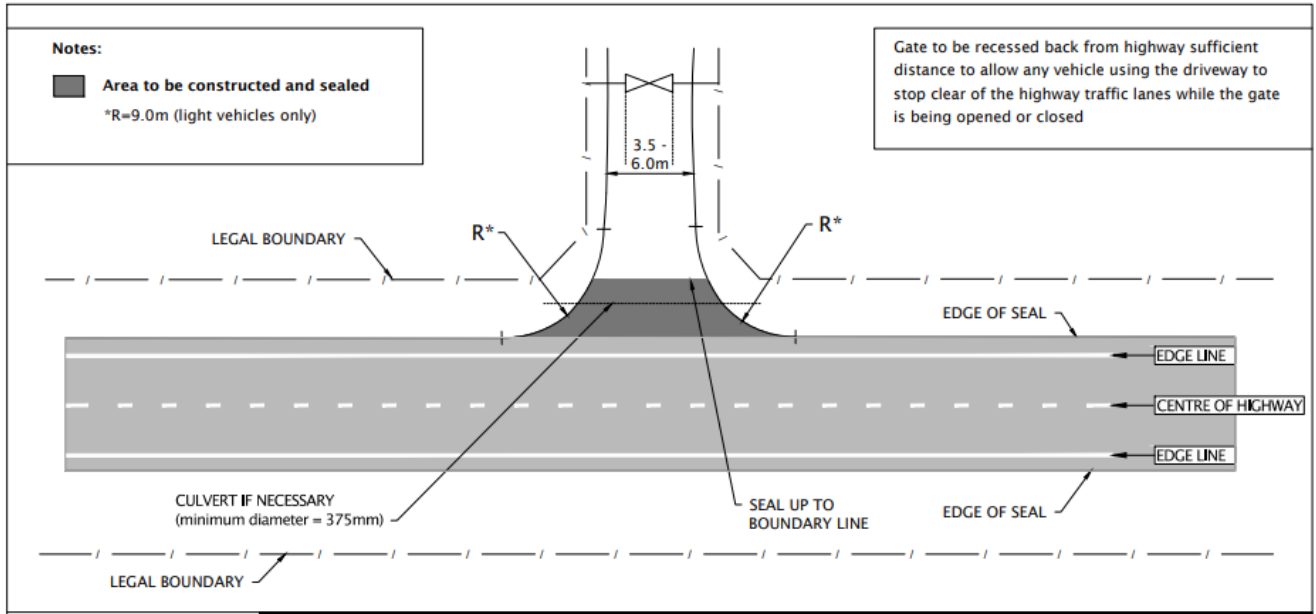
APPENDIX 20E MINIMUM SEPARATION DISTANCES FOR PERMITTED ACCESS FOR VEHICLE ACCESSES AND INTERSECTIONS



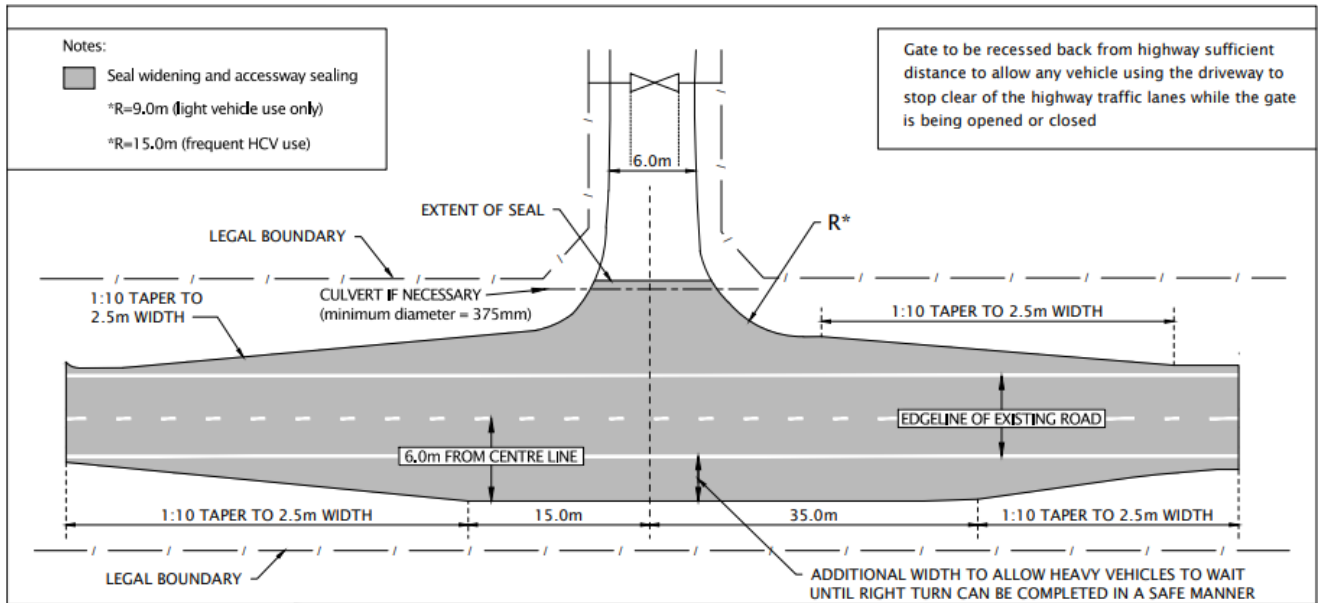
APPENDIX 20F SIGHT DISTANCE MEASUREMENT DIAGRAM



APPENDIX 20G NZTA RURAL ACCESS DIAGRAM C



APPENDIX 20H NZTA RURAL ACCESS DIAGRAM D



APPENDIX 20I NZTA Rural Access Diagram E

