

Chapter 4

Road
Classification

4 Road Classification

4.1 Overview

Road classification is a fundamental part of planning and managing the road network and involves assigning all the roads within a prescribed jurisdiction to a category, according to their function. The assigned category then helps guide future decisions about the operation, maintenance, planning and development of the network. It also helps guide expectations about the level-of-service that might be experienced by those who will use or interact with the facility.

It is important to note, however, that classification by itself does not in any way pre-determine the level-of-service or outcome experienced for any particular user. Classification is simply the basis or starting point guiding decisions about the management and future planning of the network, to ensure that this is carried out in a consistent and transparent way.

4.2 Classification Categories

Prior to the formation of Auckland Transport in November 2010 road classification was the responsibility of each of the now defunct district and city councils. Each applied different categorisation processes and categories. Thus, roads crossing administrative boundaries often changed category leading to confusion. The formation of Auckland Transport has enabled this issue to be rectified so that there is now a consistent classification and network of routes across the region.

Auckland Transport has classified all roads within the Auckland region, including State Highways managed by the New Zealand Transport Agency (NZTA), into one of two categories: arterial and non-arterial roads.

Arterial roads are further sub-divided into the following sub-categories:

- Motorways
- Strategic Routes
- Primary Arterials
- Secondary Arterials

Non-arterial roads are further sub-divided into the following sub-categories:

- Collector Roads
- Local Streets
- Lanes and Service Lanes
- Shared Space / Shared Zones

Classifications for all existing roads within the region can be identified from an interactive map on the Auckland Transport website, the link to which is provided under section 3.8 below.

It is important to recognise that road classifications are not 'set in stone'. Auckland Transport will monitor and review, on an on-going basis, their validity to allow for changing circumstances. For example, the construction of a new road on its own or as part of a major

development could impact on the role required of existing adjacent roads. Similarly, intensification of adjacent land may also require consideration and review of the role both of the immediate and adjacent roads.

4.3 Classification Process and Definition

Auckland Transport has classified all of the region's existing roads in collaboration with officials from Auckland Council and NZTA. That process firstly involved a review of the earlier classifications applied by the former city and district councils, along with the 2009 Regional Arterial Road Plan (RARP) prepared by the now defunct Auckland Regional Transport Authority and the outcomes prescribed by the Auckland Plan.

Roads were then assessed against various functional criteria, including the role played in connecting local, regional and inter-regional locations, the importance of through-traffic, public transport network role, traffic volumes, vehicle speed, degree to which corridor access is permitted, number of traffic lanes, segregation of opposing lanes, extent to which parking is permitted, safety and use by pedestrians and cyclists.

In this way the existing roads were assigned in a coherent and consistent way to one of the classification categories in *section 4.2*. Thus, the categories themselves only represent the expected functional role of the road in question, as a starting point for considering all other planning decisions that impact on the corridor.

Arterials are so defined because they perform a more significant role in enabling through trips compared with non-arterials which perform a greater role in providing access to adjacent land use. The extent of these roles, when considered alongside the other functional criteria mentioned above, determined which category of arterial (motorway, strategic, primary or secondary) or non-arterial (collector, local, lane or shared space) was assigned to each road segment.

Those seeking further details about how each of the functional criteria noted above contributed toward the classification of roads across the region, should refer to section 3.8 below.

4.4 One Network Road Classification Project

At the time of publication of this first version of ATCOP, NZTA in partnership with New Zealand's Road Controlling Authorities is in the process of developing a national One Network Road Classification (ONRC), covering all roads in New Zealand.

Auckland Transport is working with NZTA on this project as part of both the governance group and the project team. The classification system set out in this chapter will be consistent with the national system under development.

The purpose of the proposed ONRC is to support more effective and efficient asset management across New Zealand. It aims to draw upon and incorporate the current State Highway Classification System, and earlier work undertaken by NZTA and the Ministry of Transport (MOT) to develop a national road classification system.

The planned ONRC will reinforce the 'one network' approach in Auckland and help to ensure that planning, investment, maintenance and operational decisions relating to all roads reflect their function as part of the wider network beyond the Auckland region.

4.5 Role of Classification

4.5.1 Existing Road Network

Road classification is an input into the integrated transport planning framework (One System approach) outlined in *ATCOP Chapter 2*.

As explained in *Chapter 2*, the Integrated Transport Programme (ITP) details how the strategic direction, established by the various 10-year network plans (for public transport, cycling and walking, regional arterial roads and freight) will be implemented through development and application of corridor management plans, network operating plans, transport responses to growth in metropolitan centres and major projects such as the Auckland-Manukau Eastern Transport Initiative (AMETI).

Road classification is an important input into these process tools, but does not by itself pre-determine the operational or design outcome for the roads in question. It is simply one consideration as part of taking a balanced view of functional requirements and priorities, be they movement priorities or place / liveability priorities, for each segment along a road corridor. The appropriate balance between movement and place needs to consider the capacity (incorporating the safe movement of people and goods), and character (recognising the role of a road/street in the urban setting and types of buildings/landscape present or planned) of the corridor and acknowledge the role of transport to assist in place-shaping.

As noted in *section 4.2*, road classifications are not 'set in stone'. Auckland Transport will monitor and review, on an on-going basis, their validity, to allow for changing circumstances.

ATCOP Chapter 7 sets out the road layout parameters applicable for different road classification categories. *Chapter 7 section 7.4* includes typical cross-sections for each road classification category, including minimum lane and corridor widths. The aim is to provide correspondence between adjoining sections of a similar road type, thereby achieving a broadly consistent experience along routes. But as already noted, these are only typical cross-sections; the detailed design specification for all the segments of a route would still be subject to balancing movement, place, context and environmental priorities determined through the relevant corridor management plan, network operating plan, metropolitan centre plan and/or major project plan. In other words, classification is only one consideration in determining the desired cross-sectional layout.

4.5.2 Road Maintenance and Renewals

Auckland Transport is also required to maintain, repair and renew existing and future transport assets in a way that minimises whole-of-life costs.

Road classification is a key 'tool' in delivering a consistent and coordinated maintenance regime across the region's road network. *ATCOP Chapter 25* sets out 'Maintenance Priority' levels for different road classification categories (MP1 to MP8) and corresponding Service Levels (SL1 to SL8) applicable to each category under varying criteria. However, decisions

about the maintenance regime on any particular road segment will also take into account the context, place and environment, not just the relevant classification. For example, roads that are identified as high profile or encourage and promote tourism, such as Queen Street, will be subject to increased service levels compared with other locations. The same will also apply for roads identified as key passenger transport, freight or emergency lifeline routes.

4.6 Future Roads

New roads are planned, developed and constructed in a collaborative process with key stakeholders, applying relevant standards and codes-of-practice, and are subject to all the process requirements and safeguards under the Resource Management Act.

Auckland Transport is responsible for classifying new roads. New roads will be classified applying the same approach as for existing roads, by considering the functional criteria outlined above in *section 4.3* and taking into account the classification of the adjacent network.

As new roads are planned and then subsequently constructed, they not only add to the existing road network but also influence the role and function of the surrounding roads and subsequent land use outcomes. This will require Auckland Transport to review, assess and reclassify the existing road network, as and when appropriate, in response to changing circumstances.

4.7 Map of Arterial Roads in Auckland Region

Figure 9 depicts all the arterial roads in the Auckland Region along with the assigned category.

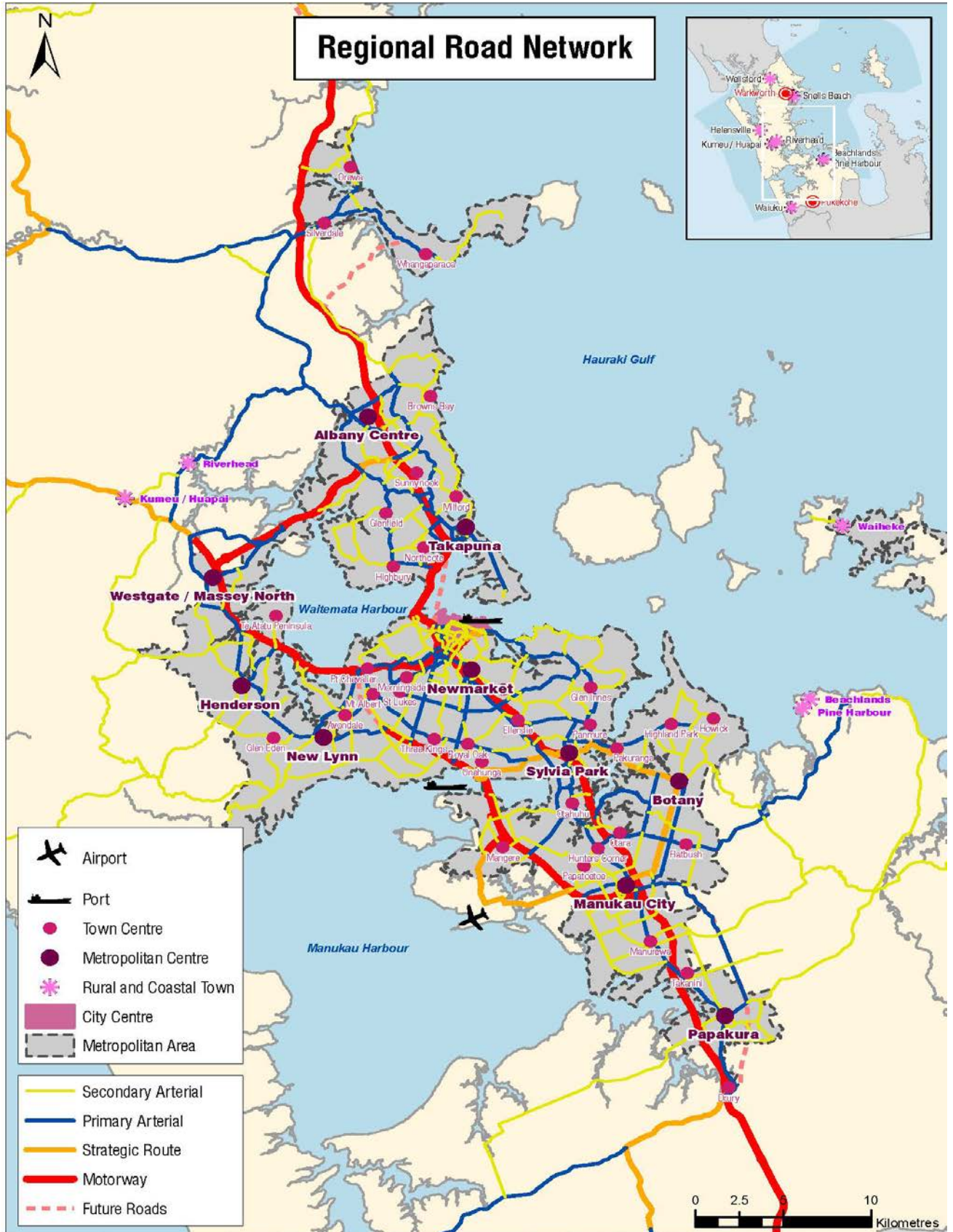


Figure 9: Map of Arterial Roads in the Auckland Region

4.8 Further Information and Road Classification Table

The Road Classification Table is currently being updated as part of the Arterial Network Deficiency Analysis (formerly referred to as the RARP Review).

Table 3 has been included showing the interim Road Classification Table.

Further guidance and details on the classification process, categories assigned and an interactive GIS map illustrating all the categories assigned to all roads within the Auckland Region will be made available once the above mentioned Arterial Network Deficiency Analysis (ANDA) has been completed and the map has been accordingly developed.

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Table 3: Road Classification Table (provisional as at 2013-07-22)

Road Classification	Arterials				Non-arterials			
	Motorways	Strategic	Primary	Secondary	Collector/Connector Roads	Local Roads/Streets	Lanes & Service Lanes	Shared Space/Shared Zones
Through-traffic function	Highest category routes which have the greatest through movement function	Intended to carry predominantly through traffic (but many also serve adjacent activities)	Intended to carry predominantly through traffic (but many also serve adjacent activities)	Provide movement within the district between key nodes	Collect traffic from local streets in order to connect with arterials	A street whose primary role is to serve access to adjacent property.	Provides side or rear service access, or access to a group of dwellings (typically up to 20 lots or dwellings)	A local street designed so that the road and pavement space is shared between motor vehicles, pedestrians and cyclists without indicating priority for any specific user. However, motor vehicles must give way to pedestrians and cyclists.
Network Connectivity function	Connect the region with other regions	Connect regions with other regions and connect areas within a region	Connect principal sectors of the region (not catered for by strategic routes)	Connect major nodes within an area. Serve adjacent key activities	Collect and distribute traffic from local roads to arterials within an area (and vice versa). Serve adjacent key activities	Collect and distribute traffic to/from local properties within an area	Provide access primarily to shops, trade units and high density housing off the local street network	



Road Classification	Arterials				Non-arterials			
	Motorways	Strategic	Primary	Secondary	Collector/ Connector Roads	Local Roads/ Streets	Lanes & Service Lanes	Shared Space/ Shared Zones
	Motorways	Strategic	Primary	Secondary	Collector/ Connector Roads	Local Roads/ Streets	Lanes & Service Lanes	Shared Space/ Shared Zones
Public Transport network role (when part of the Public Transport network)	Form part of the Rapid Transit Network (RTN)	Form part of the FTN	Form part of the FTN	Form part of either the FTN or the Local Connector Network	Form part of the FTN, Local Connector Network and/or Local services	Form part of the FTN, Local Connector Network and/or , Local services		
	Where PT is enabled on motorways buses may travel along shoulders or in general traffic lanes. No PT facilities or stops are provided except on dedicated PT roads e.g. Northern Busway	May include significant passenger transport facilities and bus priority measures along the road.	May include significant passenger transport facilities and bus priority measures along the road	May include significant passenger transport facilities and/or bus priority measures	Less significant passenger transport facilities	Limited passenger transport facilities	No passenger transport facilities	Limited passenger transport facilities, if any



Road Classification	Arterials				Non-arterials			
	Motorways	Strategic	Primary	Secondary	Collector/ Connector Roads	Local Roads/ Streets	Lanes & Service Lanes	Shared Space/ Shared Zones
Lanes	Can be 4 to 8 lanes	Can be 2 to 6 lanes	Can be 2 to 6 lanes	Can be 2 or 4 lanes	Can be 2 or 4 lanes	Generally 2 lanes	1 lane	No defined traffic lane(s)
Traffic volumes	Traffic volumes generally in excess of 40,000 vehicles per day	Traffic volumes generally in excess of 40,000 vehicles per day	Traffic volumes may be up to and in excess of 40,000 vehicles per day	Traffic flows generally up to 25,000 vehicles per day	Traffic flows typically up to 10,000 vehicles per day	Traffic flows are generally up to 5,000 vehicles per day	Less than 200 vehicles per day	Low traffic volumes. Guideline to be developed in light of experience.
Speed	High speed environment	Moderate to high speed environment	Generally moderate speed environment in urban areas. Moderate to high speed in rural areas	Generally moderate speed environment in urban areas. Moderate to high speed in rural areas	Generally moderate speed environment in urban areas. Moderate to high speed in rural areas	Generally moderate to low speed environment	Very low speed environment in urban areas. Low speed in rural areas	Very low speed environment



Road Classification	Arterials				Non-arterials			
	Motorways	Strategic	Primary	Secondary	Collector/Connector Roads	Local Roads/ Streets	Lanes & Service Lanes	Shared Space/ Shared Zones
Access	No access to adjoining land	Very limited access to adjoining land	Access can be limited or effects controlled by territorial authority (TLA)	Access can be limited or effects controlled by TLA	Access primarily to adjoining property	Significant access to adjoining properties	Access to adjoining properties	Access to adjoining properties where unavoidable
Surface area	Sealed	Sealed	Sealed	Sealed	Generally sealed	Generally sealed	Generally sealed	Generally sealed
Directional vehicle flow segregation	Directions of traffic segregated by barriers	Opposing traffic directions generally segregated by flush or raised median	May have opposing traffic directions segregated by a flush or raised median	May have opposing traffic directions segregated by a flush median	Often no segregation between directions	Generally no segregation between directions	No segregation between directions	No segregation between directions
Parking	No parking permitted	Generally no parking permitted	Controlled Parking	Controlled Parking	Parking controlled where appropriate	Parking controlled where appropriate	Parking and loading separate & recessed subject to local conditions	Loading and parking may be permitted, but controlled by time/ location.



Road Classification	Arterials				Non-arterials			
	Motorways	Strategic	Primary	Secondary	Collector/Connector Roads	Local Roads/ Streets	Lanes & Service Lanes	Shared Space/ Shared Zones
Safety	Collective and personal risk and CEPTED principles addressed	Collective and personal risk and CEPTED principles addressed	High and medium collective and personal risk along with CEPTED principles addressed	Medium collective and High personal risk and CEPTED principles addressed	Serious injury crash risk and CEPTED principles addressed	Injury crash risk and CEPTED principles addressed	Injury crash risk and CEPTED principles addressed	Injury crash risk and CEPTED principles addressed
Pedestrian and cyclist access	Pedestrian and cycle facilities are segregated	Pedestrian and cycle facilities generally segregated	Pedestrian and cycle facilities generally segregated in urban areas and at the fringe with rural areas. No segregation in rural areas	Some pedestrian and cycle segregation in urban areas and at the fringe with rural areas. No segregation in rural areas	Modest pedestrian and cycle segregation in urban areas and at the fringe with rural areas. No segregation in rural areas	Low need for segregated pedestrian and cycle facilities in urban areas. No segregation in rural areas	Shared (in movement lane)	Space shared by all road users.



The above provisional classification of roads recognises the following:

- (a) The higher speed environment of rural roads presents different safety and capacity issues to urban roads carrying similar volumes.
- (b) The road's classification is an important consideration in planning decisions to allow (or not allow) intensification of land-use on adjacent or nearby land and/ or allow additional access points onto the road.
- (c) Many rural arterials are approaching the point where if more adjacent land-use development is allowed, either the speed limit will need to be lowered and/or significant safety improvements will be required.
- (d) There may be a need to preserve the rural character of rural roads.
- (e) The classification is consistent with the draft national One Network Road Classification (ONRC) being developed by NZTA, MOT and RCAs. Work is currently underway to align the road use functional requirements with the maintenance levels of service requirements as part of the ONRC process.

An updated Table 3 Road Classification Table – showing the functional criteria considered, accompanied by an explanation of how the criteria were applied and decisions made about classification category will be provided when the Arterial Network Deficiency Analysis (ANDA) has been completed.

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